DOCUMENT RESUME

ED 070 011 CG 007 640

AUTHOR	Willingham, Warren W.; And Others
TITLE	Career Guidance in Secondary Education.
INSTITUTION	College Entrance Examination Board, New York, N.Y.
PUB DATE	72
NOTE	71p.
AVAILABLE FROM	Publications Order Office, College Entrance Examination Board, Box 592, Princeton, New Jersey 08540 ($2.00)
EDRS PRICE	MF-$0.65 HC Not Available from EDRS.
DESCRIPTORS	*Career Education; *Career Planning; *Guidance Programs; Guidance Services; *Occupational Choice; *Occupational Guidance; Secondary Education; Vocational Counseling; Vocational Development

ABSTRACT

A report was written to provide a systematic review of recent developments in secondary school guidance. This review involves: (1) describing trends in how the field is conceived--the dominant ideas, criticisms, and prescriptions for good guidance practice; and (2) describing exemplary guidance materials, projects, and programs now in use or under development--the intellectual tools of the profession and how they are being used in the schools. The report comes in three parts: (1) a narrative summary, (2) a series of charts, and (3) an annotated bibliography. The initial narrative summarizes some of the most important aspects of the charts and some general implications. The charts contain a substantial amount of information compressed into limited space, organized for quick retrieval, and referenced for further inquiry. The authors of this report have restricted their attention to secondary school guidance. It is emphasized that "career guidance" is rapidly becoming the accepted sobriquet for a variety of connected activities. (Author/BW)

Career Guidance in Secondary Education

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ED 022 611

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College Entrance Examination Board, New York
1972

The College Entrance Examination Board is a nonprofit membership organization that provides tests and other educational services for students, schools, and colleges. The membership is composed of more than 1,600 colleges, schools, school systems, and education associations. Representatives of the members serve on committees that consider the Board's programs and participate in the determination of its policies and activities.

Copies of this booklet can be obtained from the Publications Order Office, College Entrance Examination Board, Box 592, Princeton, New Jersey 08540. The price is $2.

Editorial inquiries about this booklet should be addressed to Editorial Office, College Entrance Examination Board, 888 Seventh Avenue, New York, New York 10019.

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Library of Congress Catalog Card Number: 72-90625

Printed in the United States of America

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Preface

The ways in which we decide what we will pay attention to, and what words we will use to organize our thinking about them, are never entirely clear. In education, the "themes" flow from one conference to another, creating a moment of emphasis and, very often, a superficial literature. Years later it is possible, if anyone cares, to say what was an important change and what was merely a momentarily fresh way of talking about business as usual.

These themes often originate with the advent of some educational official. Deans and presidents, superintendents and commissioners, are particularly likely to feel the need to characterize their administrations as periods of change and reform. Scarcely anyone can seize control of some piece of the apparatus and simply try to make the thing work. This is wearying but not entirely bad. There is so much to be done that it is almost impossible for an experienced educator to try to bring things into focus with a slogan and a program without catching a nugget of truth in a pan full of rhetoric. The thing that makes the difference is timing. Some undeniably good ideas are simply out of place and nothing much happens. Others catch the moment and make a difference.

The latest theme is "career education," which marks the tenure of Sidney P. Marland as United States Commissioner of Education. It is impossible to be sure, of course, but career education seems to have excellent timing and is likely to be important for a long time to come. The difficulty is in knowing what it means.

Career education could mean that the vocational-education specialists who were King of the Hill during the great depression can come back from wherever they have been while the newspaper accounts of education were preoccupied with Sputnik and "excellence."

It could mean that "guidance," which originally meant helping people find suitable jobs and then became more closely identified with the mental health movement, will return to its original purpose.

It could mean that the poor kids will be prepared for junior college and the rich kids will go to Yale.

But this doesn't seem to be exactly what Commissioner Marland and thousands of enthusiasts for career education have in mind. Since there are millions of federal dollars and enormous quantities of professional time and energy at stake, it seems important to know just what these old words mean right now.

Warren W. Willingham and the staff of the College Board's Access Research Office, until recently located in Palo Alto, California, have undertaken to provide a part of the needed explication—the current meaning of "career education" as it may affect guidance in the secondary schools.

In the simplest terms, the authors have tried to find out who is currently actively engaged in work in secondary school guidance under the influence of the career-education movement, and what it is they are doing. As it turned out, the job of reporting could not even begin until considerable conceptual analysis of the field of guidance had been done.

This is a rather unusual kind of "research" project. Mr. Willingham and his colleagues have, of course, reviewed the literature. But the literature is mainly about to happen. It was necessary to identify and talk with the people who are writing or will write the literature that will be reviewable, in the usual sense, some years from now. This was done with great energy and skill but there is no way for the authors to know, let alone to prove, that they did not leave out something or someone utterly crucial.

In addition, the work in progress had to be explained in the context of some understanding of the history and present nature of secondary school guidance. This context has been created and made explicit in the report. It is one of the report's most valuable aspects, but again its adequacy and accuracy are a matter of the knowledge and skill of the authors in the judgment of the informed reader.

The College Board is very pleased to present this report for study by anyone seriously interested in secondary school guidance. It is full of charts and bibliography, but it is also full of news—federal grants and activities, state plans, new school programs, new materials available, and so forth. The report can be used both as a very current file of some important names and as a permanently valuable analysis of guidance in secondary schools.

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September 1972

Background and Intention of This Report

Student guidance in secondary education is undergoing a very public revolution. Practitioners and theorists alike are well aware that the early 1970s have been characterized by widespread discussion of new priorities and by a storm of developmental activity. New initiatives promise to change fundamentally the nature of guidance in the secondary school. But the rush of events in the past few years has made it difficult to perceive clearly what is actually happening and what these changes may mean for guidance practice in the immediate future.

The purpose of this report is to provide a systematic review of recent developments in secondary school guidance. This review involves: (1) describing trends in how the field is conceived – the dominant ideas, the criticisms, and the prescriptions for good guidance practice; and (2) describing exemplary guidance materials, projects, and programs now in use or under development – the intellectual tools of the profession and how they are being used in the schools. Although this review is based on an extensive search of literature and ongoing activities throughout the country, it is obviously not exhaustive, particularly with respect to illustrative programs. The intention is to develop a framework for describing the major movements in career guidance rather than to report on every worthwhile activity.

The report comes in three parts: a narrative summary, a series of charts, and an annotated bibliography. The initial narrative summarizes some of the more important aspects of the charts and some general implications, but it is not intended to be self-sufficient. The charts, which appear on pages 10-46, are the heart of the report; they contain a substantial amount of information compressed into limited space, organized for quick retrieval, and referenced for further inquiry.

We who have compiled this report have talked and corresponded with a large number of people throughout the country. Their assistance is greatly appreciated, though misconceptions and oversights are naturally our own. The material should be reasonably accurate and representative as of spring 1972.

It is desirable at the beginning of this study to note several significant aspects of the overall climate in guidance and in education generally. The following conditions have developed fairly recently – these may be temporary, but they are important background factors to bear in mind:

Within the guidance profession there is a growing dissatisfaction over shortcomings in guidance practice. Basic weaknesses were formally recognized six years ago (National Vocational Guidance Association, 1966), but the need for reform and improvement has reached critical dimensions in the eyes of some leaders (for example, see Ginzberg, 1971a; 1971b; National Advisory Council on Vocational Education, 1972). Traditional techniques like testing and personal counseling have come under fire – sometimes justifiably, sometimes not. In private conversations counselors increasingly express concern over the ambiguous future role of guidance personnel in the school.

Within secondary education there has developed a continuing demand for accountability. There is also an endemic shortage of funds that tends to place special pressure on budgets for service activities such as guidance. These potent forces place a new priority on guidance services that are efficient and have a demonstrable benefit to the school and the students.

Students are now much less intimidated by educational institutions than they used to be, and they no longer cooperate unquestioningly with programs conceived in their behalf. There is a marked national trend toward giving students more voice in the curriculum and all matters effecting them. Students can be expected to have more influence in deciding what is relevant, what they will do in school, and what guidance services they need.

The federal government promises to have a pronounced effect on guidance practice through its promotion of career education by the various bureaus of the United States Office of Education. The purpose of this effort is to modify the basic objectives of secondary education – to integrate vocational and academic education and to insure that all students leaving high school are prepared either for work or further education. As a result great stress is being placed upon career guidance, and substantial federal funding has instigated a wide variety of developmental projects that are likely to have a major influence on guidance practice.

Scope of Report

For the purposes of this report we have restricted our attention to secondary school guidance, though it is obvious that much of this material extends to

guidance applications in other settings, particularly community colleges and adult education. It seems clear that "career guidance" is rapidly becoming the accepted sobriquet for a variety of connected activities including educational guidance, career development, and vocational counseling. These are the areas of primary concern in this report. We are for the most part ignoring certain obvious functions of secondary school guidance (administrative duties, providing personal assistance to students, disciplinary responsibilities, and so forth) in favor of investigating objectives clearly related to career guidance.

Current conceptions of career guidance appear to embody four major objectives:

To develop *educational awareness* through understanding of educational environments, the relationship of career choices and educational requirements, and educational opportunities in specific institutions and programs.

To develop *career awareness* through understanding of career opportunities, life styles that are reflected in different types of work, and job openings.

To develop *self-awareness* through understanding of abilities and competencies, interests and values, and personal characteristics that are important in giving direction to educational and career goals.

To develop *planning skills* through understanding of personal decision-making, coping skills to meet different life situations, and the procedures involved in advancing from school to college, training programs, or work.

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  b. State Plans
  c. National Developments
Chart 7. School Programs

The field of career guidance is broad, fragmented, and currently quite active. It is impossible to describe briefly or inclusively. But a convenient approach to the task is to examine the major influences and initiatives that determine the shape and development of the field. We have chosen to look at seven initiatives of career guidance that allow us to observe status and change.

Each of these seven initiatives is examined by means of Charts 1 through 7 (see List of Charts and pages 10-46). The first two reflect current professional views of what career guidance is or ought to be. The field is based on certain dominant ideas that in turn generate negative criticisms of existing practices and positive recommendations concerning needed program components.

Charts 3 and 4 represent major "outside" influences. One is obviously modern technology. A more general term would be methodology, but it is beyond the scope of this review to consider specific effects of other methods such as counseling and testing. The other outside influence is federal stimulation —a force with immediate effect but likely also to be capricious.

Charts 5, 6, and 7 reflect the conditions of current practice. "Materials" refer mostly to commercial products that serve specific and limited needs in guidance. "Local Experiments" are more comprehensive activities that usually have special funding and a temporary existence. "State Plans" and "National Developments" are more ambitious with respect to integrating several guidance objectives. "School Programs" include exemplary guidance programs operating in school systems. These three—materials, projects, and programs—describe the translation of professional prescription into practice. To some extent these products take on a life of their own and often maintain considerable momentum at the practitioner level despite contrary ideas among those who "lead" the profession. In any event, together they describe current procedures and the major new developments.

Seven Initiatives in Career Guidance

Dominant Ideas

There are perhaps an indefinite number of ways to describe the dominant ideas that shape guidance in the secondary school. Of the eight listed in Chart 1, the first two represent the traditional and somewhat antagonistic orientations—the so-called trait-factor approach and the more nondirective method of personal counseling. The two approaches represent different values (scientific versus humanistic), different emphasis in training, and different practices. Many counselors have administered tests and openly preferred personal counseling, but the two certainly are not mutually exclusive. Both are criticized for different reasons. The trait-factor approach works much better in theory than in practice because it appears that multiaptitude tests have limited value in predicting career choice or success. Personal counseling has important status associations with psychology and psychiatry, but one-to-one counseling is now widely regarded as impractical for educational and economic reasons.

The next four ideas in Chart 1 represent substantive emphases that have gained much momentum in the past five years. It is now commonly felt to be essential that students learn more about the world of work—that the serious imbalance between guidance for college and vocational orientation be redressed. Closely related to this is the recognition that students develop career awareness over a long period of time and require different types of career guidance at different age levels.

Another important idea is the notion that young people must learn how to make decisions and how to recognize situations that demand decisions. Students require help in this process because it has become far more difficult to deal with career planning than it used to be, and such decisions involve more serious questions concerning values and life styles than students generally realize.

As a consequence of these ideas, there are new movements to alter the basic orientation of guidance in the schools. Since the mid-1960s, there have been concerted efforts by some professional leaders to move guidance into the school curriculum and to develop comprehensive systems approaches that would integrate services and objectives (last two items in Chart 1). As these movements develop they seem certain to alter basically the role of the counselor in the school and the way guidance services are coordinated.

Prescription—Criticisms and Recommendations

Chart 2a documents a variety of criticisms of guidance in the secondary school, some that are well-known. References provided in the first column elaborate each. Those on the first page of the chart lie at the heart of serious professional conflicts. Counselors emphasize personal counseling and guidance for college. They draw criticism for giving little attention to career counseling and being insufficiently trained either for such specialized work or for the broad personal counseling often preferred by guidance personnel.

Related to these criticisms is the fact that counseling goals are increasingly recognized as so all-encompassing and so professionally oriented that they are unrealistic and often lacking in immediate practical value to students (second page of Chart 2a). This lack of an integral, necessary function that ties guidance to the curriculum seems related to other criticisms that guidance is isolated in the school and has collected a variety of administrative tasks that occupy too much of counselors' time.

Chart 2a pulls together a variety of possible implications such criticisms might have for different types of services. The most important implications seem related to: (1) the need to make services relevant to career development of all students and (2) the need to make services self-contained, attractive, and clearly useful from the student's standpoint.

Chart 2b cites a wide variety of specific recommendations regarding needed components in career guidance. These suggestions come largely from professional leaders and special committee reports. The individual prescriptions for particular services have been organized in Chart 2b according to the objective most likely served and the service most commonly used to achieve that objective.

Traditionally, psychometric instruments have been at the heart of secondary school guidance programs. They still are, but currently they receive little attention and cause little excitement in the field. The most promising new applications lie in self-administered scales to assess career awareness and planning skills. Student assessment in these areas (for example, vocational maturity) has been mentioned often, but relatively little good developmental work has yet been done. Published guides represent another traditional service. In this instance, most recom-

mendations cite the need for more relevant and useful material rather than new types of guides.

Computer services, either interaction or turnaround, excited great attention in the mid-1960s. The first generation turnaround services (especially locater services) proved disappointing, but more useful and less expensive service is in the offing (for example, College Locater Service, 26*). Direct interaction with the computer is still felt to be the wave of the future, but such programs are being adopted much more slowly than anticipated. The most promising functions of the computer are still assumed to be retrieving information, mediating complex career decisions, and monitoring the educational process. The concluding section on technology cites specific programs and developments.

The most numerous proposals for new career-guidance components and the most feverish activity are in the area of directed self-study. New proposals and products include curriculum materials, programmed instruction, workbooks, games, simulations, and so forth. Rapid development is being spurred by the federal initiative to create career-guidance curriculums in the schools from kindergarten to twelfth grade. To date, much of this work has been funneled through the vocational-education establishment, and as a consequence, the materials stress career awareness far more than educational or self-awareness. There is also considerable interest in directed self-study to develop planning skills.

The Role of Technology

The possibilities of applying modern technology to guidance have occasioned much optimism for the future, but the future has become more distant. U.S.O.E. has pulled much of its money off the very expensive developmental work; most local schools evidently cannot afford the few sophisticated systems now available. Chart 3 distinguishes computer-based technology from other media. The distinction is important because the pace of work is quite different.

With the new emphasis on career guidance, the quantity of occupational information films, filmstrips, slide-tapes, microfilm, and so forth, continues to increase considerably faster than corresponding quality. But one system that is rapidly receiving nationwide acceptance is VIEW (Vital Information for Education and Work). VIEW (47) began in San Diego County in 1965 and is currently operational in nearly 30 states under various acronyms (WISC, VITAL, WORK, and so on). The backbone of VIEW is its banks of aperture data-processing cards. Students use these cards to select occupational areas with characteristics of particular interest to them. They then read descriptions of these occupations, including local job opportunities, from microfilm embedded in the cards. In some states, such as Wisconsin, it is reported that most senior high schools are using the system.

The development of computer-based guidance systems is a different story. Although several systems have been developed over the past five years (for example, ECES, 78; CVIS, 100; ISVD—see O'Hara and Tiedeman, 1971), most have been too grandiose, both conceptually and economically. As one leader in career guidance put it, "We have not really developed systems with sufficient flexibility. We have tried to build in all sorts of experiences and information on-line that more appropriately should be off-line." Students are forced into considering career guidance according to an appointment schedule, and the expense differential between on-line versus off-line time is considerable. Despite these factors, one system, CVIS (100), seems to be satisfactorily providing occupational and educational information and performing academic scheduling functions. CVIS is slowly being adopted by school districts in Illinois and some other states.

Manpower agencies in a few cities have developed computerized job banks that present job-market information updated daily. This is a big step toward statewide or regional occupational supply-and-demand data and will likely become more widespread in the next few years. Oklahoma, for example, already has the beginnings of such a system (OTIS, 45). There is considerable professional and federal impetus behind this type of development.

An important fact may be learned from an analysis of the CVIS operation. Such systems probably will succeed in local districts to the extent that they provide data to meet administrative responsibilities (scheduling, registration, and so forth) as well as student needs. CVIS appears to do both well. The expense of systems that simply provide assistance to the student will likely be justified less frequently in relation to competing priorities.

* Throughout this section, and in Charts 1 to 7 and the annotations, numbers attached to names of programs and so forth refer to the materials, projects, and programs described in Charts 5a to 7.

Federal Activities

The guidance initiative that currently appears to be of overriding importance is the Office of Education's emphasis on career education. This concept implies: (1) implementation at all levels, kindergarten through adult; (2) removal of existing barriers between academic, general, and vocational education; (3) providing each student with a marketable skill upon leaving school; which, in turn, implies (4) 100 percent placement in jobs or subsequent education for students at each exit level.

Including those federal programs which are directly a part of the career-education effort, there appear to be about 70 separate funding programs that have either a specific guidance component or have direct implications for guidance. The more important programs are described on Chart 4. Except for the recent initiatives in career education, there are apparently few federal guidelines for systematic support of programs with particular guidance objectives. The older activities can be roughly characterized as "human resources" and "systems resources."

Accent on "human resources" seems to be more characteristic of those guidance activities funded under Elementary and Secondary Education Act Titles I and III. These include: (1) use of parents and students as paraprofessionals, such as counselors' aides; (2) increased communication with parents through home visiting, evening appointments, and so forth; (3) group guidance techniques; and (4) various guidance interventions such as behavior modification techniques or community-based counselors working with potential dropouts.

Accent on "systems resources" seems to be more characteristic of programs funded through the Vocational Education Acts. These programs include technologies, such as computer-based guidance systems, and use of a variety of media like film, videotape, television, and so forth. They also include such systems concepts as accountability, behavioral objectives, modular learning units, and continuous monitoring of individualized instruction.

According to U.S.O.E., $84 million has been spent on career education in fiscal years 1969-72. Completely aside from this deft, post facto accounting, it is actually impossible to separate career guidance from career education. In addition to individual projects that can now be defined as career education, there are three major initiatives through which U.S.O.E. is carrying out the current mission of emphasizing career guidance.

First, U.S.O.E. is redirecting priorities as best it can in the regional laboratories and research and development centers. These partly autonomous activities are difficult to steer, but two or three (Ohio State in particular) are following certain directions linked to the second major initiative—the attempt to develop four models of career education based with the school, employer, home, and community. The major projects are described below in reference to Chart 6c.

A third U.S.O.E. initiative is to stimulate career-education models, kindergarten through adult, in each state. Part of these funds is going to local projects of doubtful significance. The more important aspect of this activity is the systematic development of statewide models of career education. Those state plans that have been developed as of this date are described in Chart 6b. (See also University of Missouri coordinating project in Chart 6c, 90.) The potential significance of these plans is self-evident; within two years they may exert strong influence over program adoptions in some states, particularly if the plans become linked to federal money to support career guidance.

Materials

Guidance materials represent an important initiative because they constitute the concrete product of theory and prescription. They also represent an important part of the armamentarium. In that same sense guidance materials tend to define boundaries of guidance practice. There is a very large number of guidance materials—most in the form of tests or printed guides. Chart 5 includes items that are well-known, widely used, or especially interesting.

Materials intended to develop self-awareness (Chart 5c) consist mostly of conventional multiaptitude tests and interest inventories. Despite their number and substantial development, these are generally not well designed to integrate self-awareness and career planning—possibly because it has been erroneously assumed that counselors could do this in individual guidance sessions. The General Aptitude Test Battery (GATB, 52) is probably the best of several tests of this sort, but it is not designed for school use. The ACT Career Planning Program (48) and OVIS (57) represent two of the newer instruments that are designed for career guidance in secondary schools. The Washington Pre-College Testing Program (64) could eventually represent an additional entry on the national scene. But all in all, the

psychometric field has not been especially active in this area.

There are few examples of innovative tests that employ self-assessment techniques and focus on vocational maturity, although there is much talk about them. Both kinds of tests are likely to be very much in demand. Items 59 and 60 (Chart 5c) are two examples of the former, and Crites' Vocational Development Inventory (62) is the sole published instance of the latter.

There has been tremendous activity in developing career-awareness materials (Chart 5b). Many published guides of various sorts have been developed, though most are criticized for being oversimplified, irrelevant, or overly professional in orientation. The stimulation of federal money will undoubtedly result in further proliferation of career-orientation publications.

There are several notable trends in the development of career information. One is the move to provide local information about supply and demand as well as specific job openings. VIEW (47) and CVIS (100) are good examples of projects that have gained considerable national acceptance. Career information also represents a likely growth area for computer technology because governmental agencies seem intent on better organization and service in this area. Finally, career-awareness materials have gone multimedia to a striking degree—computers, filmstrips, tape libraries, telephone hookups, tool kits, microfiche, and so forth.

There are very few developments in materials designed to enhance educational awareness. The principal published guides are listed in Chart 5a. A primary new thrust is to somehow get across in narrative form the flavor of postsecondary institutions. *Barron's College Profiles In-Depth* (5) represents a major folksy effort, but only 150 of these 20-page descriptions have been produced and these only partially succeed in presenting an adequate picture of the colleges. A very good example of another movement is *Approaching Stanford* (4), the student handbook written annually by freshmen who "tell it like they think it is." Locater services complement printed guides, but most have been unsuccessful—probably because of a combination of poor service and high cost.

There is much excitement in the decision-making area. Chart 5b describes the best-known new materials and programs. Most emphasize simulation in one way or another. For example, group guidance materials rely heavily on illustrations; the computer interaction model leads the student through decision processes; the games purport to represent real life in mock though heuristic situations. Life Career Game (69) has sparked considerable interest, and SIGI (70) is widely known. But many of the planning materials are still under development and will make a substantial showing over the next year in the form of curriculum materials.

Projects

Projects are the key initiative in career guidance. The items described in Chart 6 (a, b, and c) are especially important because they represent the main developmental efforts. As such they reflect the latest theory and also current assumptions about the future shape of guidance. Of more importance, they give the best available foretaste of what well-accepted operational programs may look like two to five years from now.

Chart 6a describes a highly selected group of local experiments, though some important ones like the Appalachia Career Decision-Making Program (73) will obviously have national impact. So many local projects have been spawned by the $22.5 million of Vocational Education money and assorted other funds that U.S.O.E. contracted with North Carolina State University's Center for Occupational Education (91) in July 1971 to determine both their quantity and quality. The Center's initial investigation uncovered about 250 projects and settled on 41 for teams of knowledgeable guidance, vocational-education, and curriculum people to investigate. The primary long-range benefits should be: (1) the objective criteria and standards set up to assess these projects, and (2) the development of an ideal career-education program based upon on-site evaluations.

Virtually all projects that appear to be at the forefront of the career-education movement have two factors in common with respect to guidance. One is the assumption that a large portion of what we now call career guidance must be incorporated within the curriculum to have any impact on the majority of students. When this happens there is likely to be a corresponding realignment of counselor functions. In their Career Conscious Individual Model (see 90), Gysbers and Moore have categorized these functions as direct, shared, and indirect. Although work represented in these categories appears reasonably traditional, the amount of time counselors spend performing each type may represent the big

change in guidance practice.

The other common factor found in those projects that hold promise of significant impact—such as the Comprehensive Career Education Model (92), the Career Decision-Making Program (73), and Operation Guidance (81)—is the degree to which they permit local initiative and choice. Each of the projects mentioned above intends to provide a range of materials and curriculum units from which district personnel may choose. The most ambitious project of the three, CCEM, has identified over 2,000 behavioral objectives (presumably to be combined in some way) and will eventually have curriculum units and guidance materials intended to meet each objective. From this "cafeteria" the local district will be able to select which objectives and, correspondingly, which units and materials it wishes to use.

Chart 6b describes the reasonably firm statewide plans already drafted. Gysbers, who is working closely with state planners (90), estimates that by early 1973 another 10 to 15 states should have developed at least guidelines for career development and guidance. A common characteristic of these plans is the obvious effort to integrate career guidance with respect to theory, practice, and specific objectives. This means continuity of content and interdisciplinary effort.

As state representatives get together now, there seems to be general recognition that numerous groups have interest in the development of career education. There appears to be movement away from the initial concentration of people and dollars representing vocational education. U.S.O.E. is trying to spread career education across its various relevant bureaus. Also, on the state level, numerous planning conferences have been scheduled throughout 1972, and it appears that school guidance people have been well represented.

Chart 6c shows several major national developmental efforts. These have been mentioned one or more times previously. They deserve careful observation because they are likely to be quite influential over the next several years. Most have not yet produced much of substance, but these activities have been the main organizing agents for U.S.O.E.'s career-education movement. Consequently, these activities are described in Chart 6c with a projected chronology of expected results. Together they provide the best sense of how U.S.O.E.'s career-education strategy is likely to proceed.

Programs

There are, of course, hundreds of local guidance programs in continuous operation. Chart 7 describes a few that have attracted attention because of advanced features. These operational programs overlap a good deal with the specially funded experimental projects of Chart 6a.

There is no typical program. Several have computer components. PLAN (106) and CVIS (100) are the best examples of highly sophisticated computerized systems of career guidance. Most of the programs acknowledge need for integration of career guidance into the curriculum and integration of vocational education with general and academic programs. None achieves this completely, but the Minneapolis (110) and Kimberly (Idaho, 104) programs appear to be fairly successful attempts.

It is difficult to assess the effectiveness of the delivery of career information in these programs. In CVIS it looks as though career information is presented attractively and usefully, and a student survey seems to confirm this. The Minneapolis and Kimberly programs appear to have carefully planned, specific packages of career information, but neither embraces the complete span of kindergarten through grade 12. Kimberly appears to be trying to involve all course areas in the presentation of career information and development of planning skills. This program is also interesting in that it gives students responsibility for decisions about taking tests, and for interpretation of test results.

None of the programs looks wholly satisfactory in its process for developing planning skills. All have planning as a stated or implied goal, yet the activities for accomplishing this are somewhat disjointed and usually consist of a series of experiences meant primarily to provide information and create awareness. Perhaps the computer systems are exceptions to this, since the computer imposes a powerful and logical discipline on the student in terms of sequencing information and decisions. One concern with respect to the CVIS guidance system is the apparent reliance on the computer for a variety of guidance functions that might more appropriately and more economically be accomplished through use of other resources.

It is somewhat difficult to tell to what extent these programs help the student rationalize the process of educational planning with respect both to secondary and postsecondary education. In most of the pro-

grams it appears that the student must make the link between career patterns and specific courses that he must take to achieve the necessary background. Mistakes in course programming seem possible in most programs with the exceptions of CVIS and PLAN. The student using one of these two programs presumably can be told specifically that he lacks certain courses appropriate to his career objectives.

Implications for the Immediate Future

The preceding has been, in effect, a summary of a great deal of detailed information presented in the seven charts. Several general implications are worth comment. We are not dealing with the same set of circumstances that existed just a few years ago. In fact, there are four developments of such importance and general applicability that they amount to changes in the ground rules of guidance practice.

First, and ironically, the federal government has almost left-handedly defined career awareness as a critical part of school guidance. In essence, U.S.O.E. has said that career education is a must, and (incidentally) guidance is an important part of career education. The U.S.O.E. influence is reflected in all new developments of importance—in national experimental projects and in state plans. Ginzberg's influential book (1971b) also integrated much existing evidence and prior reputable pleas for more attention to career orientation. It has added very important fuel to the federal fire, though many counselors have little sympathy for "vocational counseling" in new bottles.

Much of the new emphasis represents a more sophisticated view of the need for career awareness, not just warmed-over occupational information courses or trait-factor practices. It is now widely assumed that an understanding of the psychology and sociology of work should be an important part of education, so much so that it is very rapidly becoming unacceptable to think of school guidance merely as personal and educational guidance.

Second, the career-development theory conceived in the 1950s and 60s has finally caught on big. People like Tiedeman, Super, Katz, and Ginzberg have been saying for years that career choice is obviously not a one-time decision, but the implications of that realization are suddenly reflected at every turn. New career-guidance models stress the longitudinal aspects of the guidance process, the necessity to help young people learn about careers, and the importance of vocational maturity as expressed in different stages of career development.

As a result these various ideas have caused great importance to be attached to the vertical integration of guidance. This does not mean simply a succession of decision points. It involves recognition of the slow, continuous process through which students gain sophistication and coping skills. So it has become obvious that career development is a substan-

tial educational commitment that must be vertically integrated throughout the curriculum.

Another form of integration accounts for a third major development. Moving career development into the curriculum requires various forms of horizontal integration. These are occurring left and right—on paper. The state plans, experimental projects, and new materials specify dramatic new forms of integration and coordination across the educational structure, including the integration of academic, vocational, and general curriculums, the integration of career guidance and career education, and the integration of school and community resources. In addition, substantive forms of integration are routinely prescribed; for example, a closer connection between career awareness and educational awareness, a closer connection between testing (self-awareness) and planning skills. In some locations such forms of horizontal integration have been achieved to some extent, but long-term success is cloudy if not dubious. Right now the important implication is that pressure for horizontal integration of the guidance function greatly complicates program development, coordination, and administration.

A fourth development of major importance is the fact that the guidance field is in a state of flux. A glance at Chart 6 shows the intense activity that is consuming millions of dollars and will soon begin to dump literally scores of major new materials, programs, and publications on the schools and education agencies.

Equally important is the fact that guidance objectives and priorities are volatile. Guidance is moving in so many directions that its professional character in 1975 is very chancey to predict. Some of the career emphasis will no doubt leave office with Commissioner of Education Sidney Marland. The future role of counselors in the school is an open question widely discussed. Since many counselors are strongly committed to a professional image that stresses personal and educational counseling, it would not be surprising if the career-education movement created a serious professional cleavage among school guidance personnel.

While it is difficult to predict the future, it seems an especially propitious time to introduce programs that are relevant to current values and objectives. The guidance profession seems receptive because it has recently developed a capacity for self-examination and is actively searching for new models of professional practice and image. The schools seem receptive because new guidance models are now becoming known to school administrators who are more responsive to accountability objectives.

The new models include a variety of emphases that will characterize new guidance programs over the next several years. Especially in demand will be curriculum materials and programs that involve students in real-life situations. Favored methods include simulation, self-directed activities, group guidance, use of new media, interdisciplinary cooperation, and multimethod integrated programs. The high priority processes are student-centered: planning, decision-making, and coping. It will be especially required that these student-centered services be directed to all students, individualized to their level of aspiration and vocational maturity, and designed to serve educational and career functions that students recognize as actually useful and realistic. With respect to content, special emphasis is now being placed on understanding the meaning of education and work—not just their outward characteristics. At this writing there are relatively few guidance materials that reflect these values. That will not be true a year from now.

Chart 1. Dominant Ideas

IDEA	DESCRIPTION	HISTORY AND STATUS	IMPLICATIONS
Trait-factor approach is the scientific basis of guidance.	The essential task of career guidance is to match individual traits (abilities, interests, etc.) with important job factors (work requirements, necessary skills, etc.). Done effectively, this maximizes social benefit and likelihood of individual satisfaction and success.	The "matching men and jobs" conception of vocational guidance was originated by Frank Parsons in 1908 and dominated the field until 1950. It was advanced by psychometric development and job analysis of industrial engineers in the 20s and 30s. Greatly encouraged by multi-aptitude movement (Louis L. Thurstone and Clark L. Hull), differential prediction of career success in military (Paul Horst, John C. Flanagan, et al.). Humanistic and developmental counter-reaction was fanned by empirical evidence of poor results (Thorndike and Hagen, 1959). Still a fundamental basis for much career guidance--particularly out of school--but regarded as insufficient by most experts and dismissed by some.	• In broad outline the approach seems inescapable in any general model of career guidance, but traditional applications seem certain to meet resistance. • Psychometric methods must be integrated into developmental models of self/career awareness rather than choosing a job on the basis of an aptitude profile.
Guidance is primarily personal counseling.	Emphasizes view of guidance as concern for total development of individual, not just educational/vocational assistance. Goal of counseling is self-realization. Counselor should create climate in which client can solve his own problems.	Developed as a reaction against "actuarial" counseling (mechanized approach) and "saturation testing." Influence of non-directive psychotherapists (Carl Rogers, et al.) very strong. Krumboltz (1966) emphasizes behavioral change aspect of personal counseling. This is the prestige component of guidance profession still stressed in many training centers though strongly criticized by some observers.	• Continued conflict between social and professional interests--also between *personal and career counseling.*
Career awareness is an integral part of school guidance.	Complexity of socioeconomic environments walls off student. The job structure changes rapidly. Contrary to earlier times when career role models were readily observable, it is now necessary to teach students what the world of work is like.	Occupational information courses have a long and deadly history. Schools have come to neglect vocational preparation in favor of more glamorous college guidance, but recent emphasis by U.S. Office of Education promises to stimulate much new activity.	• Important component of career development; career-guidance services will have to be compatible with major career-information models.
Career choice and adjustment is a lifelong process involving developmental stages.	Career choice is not a one-shot decision. Individual moves through stages; important choice points occur at 9th and 12th grade. Vocational maturity at different stages is characterized by different values, different concerns, and different guidance needs.	Ginzberg (1951) was a catalyst for the developmental approach and theories of occupational choice. Super (1963, 1968) was an important contributor to ideas of self-concept in vocational decisions, vocational maturity, and the delineation of life styles. Crites (1971) and Gribbons and Lohnes (1968) have done extensive work in measuring vocational development. This general idea is currently quite important. Has the weight of the profession and the U.S. Office of Education behind it.	• Guidance services must be better integrated across grade levels. • Materials must be appropriate to the level of vocational maturity of individual students. • Periodic evaluation of vocational maturity itself may become an especially important objective in career guidance. • The largely untapped market of adult career guidance will likely receive much more attention. (Federal initiative may be the key.)

Chart 1. Dominant Ideas

IDEA	DESCRIPTION	HISTORY AND STATUS	IMPLICATIONS
Career patterns reflect life styles.	Occupational choices and career patterns are basic to the life style of the individual and reflect personality, hopes, social background, etc. Career choice thus involves far more than matching abilities and job requirements. It is, in Super's terms, an expression of the individual's self-concept (and vice versa).	Influenced by sociological and developmental psychology. Charlotte Buehler's sequential development concept and Robert Havighurst's framework of life stages supplied groundwork for Super's (1969) work in career patterns. Important today to research sociologists and psychologists and to students, especially those who question work ethic and traditional values. Doesn't always filter down (Wilensky, 1964).	• Important consideration in materials and program design. Especially needed to add realism to career guidance.
A primary goal is to develop the student's decision-making skills.	Career choice is a rational process--not determined by chance or social position but subject to scientific investigation, amenable to intervention, and responsive to training. The counselor's job is to make the student aware of alternatives and to develop his ability to make rational decisions.	Outgrowth of decision theory developed after World War II. David Tiedeman most important theoretical contributor--sees decision-making as a continuous process in which computers can be "mediators" (O'Hara and Tiedeman, 1971). Martin Katz developed an early practical model [70]. Gelatt (1962) created first school program based on this idea.	• Very promising organizing theme for career guidance.
Career development must be incorporated in the curriculum.	For educational and practical reasons career guidance must be an integral part of the student's formal education. This is necessary to obtain the time, the diverse teaching skills, and the continuity that are required to cope with this developmental learning problem.	In 1917 George E. Myers was one of the first to argue that vocational guidance should be part of the curriculum. In recent years realization of the complexity of career development and disappointment with the limited success of present guidance practices has led to widespread agreement that career development principles must be moved into the curriculum (National Vocational Guidance Associaiton, 1966). Present federal programs are heavily committed to this principle for all age levels.	• Increasingly career-guidance components will be adopted by curriculum specialists to fill slots in designated curriculums.
Guidance requires a systems approach.	Multiple goals of guidance require complementary skills of different disciplines, coordination of large amounts of information, integrated program packages, and focused effort on specific objectives--that is, a systems approach that integrates resources.	Systematic analysis and coordination of complex activities had its birth in World War II and has been used in education only in the past 10 years (see Campbell, et al., 1968). This approach now assumes a prominent role in the federal initiatives and most applications of computer technology.	• Counselor will be increasingly required to serve as the administrator of a program that involves other members of the school staff and a variety of media. • Services not compatible with "the system" will become more difficult to adopt.

Chart 2a. Prescription — Criticisms of Current Practice

CRITICISM	GENERAL IMPLICATIONS	IMPLICATIONS FOR DIFFERENT TYPES OF SERVICES				
		PSYCHOMETRIC INSTRUMENTS	PUBLISHED GUIDES	COMPUTER TURNAROUND	DIRECTED SELF-STUDY	COMPUTER INTERACTION
Too much emphasis on one-to-one counseling (Hoppock, 1970; Ginzberg, 1971b; National Advisory Council on Vocational Education, 1972)	Materials should be designed for the student in vocabulary and graphics--simple to understand and unlikely to generate student questions or require counselor interpretation.				Group guidance will be used much more--a design must for many future programs. Much potential use for programmed texts.	
Professional undertraining of counselors (Dyer, 1966; Brim, et al., 1969; Rhodes, 1970; Ginzberg, 1971a)	Materials must be self-contained.	Test interpretive aids should employ straightforward, expositional, nontechnical methods.		Computers will compensate for counselors' limited occupational knowledge.	Curriculum materials should incorporate possibility of team teaching.	
Limited authority of counselors (Waetjen, 1966; Ginzberg, 1971b)	Counselors are frequently neither instruments of change nor adopters of programs. Materials must appear useful to a variety of school administrators.				Client may actually be director of curriculum planning.	Upgrading counselor competence in use of computer systems might improve professional position.
Career guidance is a minor commitment of most counselors (Wrenn, 1962; Campbell, et al., 1968; Hoyt, et al., 1972)	Attitudes will be slow to change, but school programs will have to include career guidance because of massive national emphasis.	Testing programs will have to be integrated with career-awareness programs.			Career-guidance components will need to be self-contained because of limited counselor familiarity with occupations.	
Too much emphasis on guidance for college (Wrenn, 1962; Armor, 1969; Rhodes, 1970)	Materials for college guidance should include career awareness. Emphasis on career planning will demand that greater effort be made to meet guidance needs of students who will not attend college.	Most tests are heavily academic--often seem redundant to students and counselors.	Should stress relationship between college and career.		Need for a comprehensive approach to develop awareness and planning skills.	

Chart 2a. Prescription—Criticisms of Current Practice

CRITICISM	GENERAL IMPLICATIONS	IMPLICATIONS FOR DIFFERENT TYPES OF SERVICES				
		PSYCHOMETRIC INSTRUMENTS	PUBLISHED GUIDES	COMPUTER TURNAROUND	DIRECTED SELF-STUDY	COMPUTER INTERACTION
Counselors have too many administrative duties (Wrenn, 1962; Campbell, et al., 1968; Mahler, 1969; Borow, 1970)	Counselors will resist additional "housekeeping" for external programs.	Procedures need careful design to minimize counselor resistance. Need to be perceived as timesaving aids.		Should be self-contained, incorporate counselor incentives, and not require paperwork.	Supplementary materials for counselors should emphasize professional contributions.	
Guidance often regarded as budget luxury (Ginzberg, 1971b)	Local school funds for guidance likely to be quite limited for several years.	Must guard against apparently redundant testing.	Low cost.		Low cost. Reduces need for extensive one-to-one counseling.	Expensive.
Lack of relevance and practical value of guidance. (Barry and Wolf, 1962; Rhodes, 1970; Ginzberg, 1971b)	Services need to be directly responsive to student's perception of his needs. Local occupational information should be provided.	Instruments must have face validity and student acceptance. Must be clearly designed for student benefit not for "pigeonholing" purposes. Program design must insure that results are used.	Occupational guides should be directed to dropouts and disadvantaged students as well as middle-class high school graduates. Timing is important for potential dropouts.		Perceived value critical--traditional career courses especially suspect. New life style and gaming approaches emphasize relevance.	Information must be kept current or its value is lost.
Lack of specified, realistic goals (Wrenn, 1962; Campbell, et al., 1968; Rothney, 1970; Ginzberg, 1971b)	Programs should specify limited, educational-vocational objectives--not seek unrealistically to "add significantly to human happiness." (Ginzberg, 1972)	Benefit to student should be clear.			Should include behavioral objectives that reflect student needs.	
Occupational information lacks interest and reality to students (Barry and Wolf, 1962; Hayes, 1968; Samler, 1971)	Need for joint exploration of self and world of work as a process of examining potential careers.		Guides for students should be written from student's viewpoint, not that of the manpower specialist.		Should emphasize life styles rather than job characteristics.	

Chart 2a. Prescription—Criticisms of Current Practice

CRITICISM	GENERAL IMPLICATIONS	IMPLICATIONS FOR DIFFERENT TYPES OF SERVICES				
		PSYCHOMETRIC INSTRUMENTS	PUBLISHED GUIDES	COMPUTER TURNAROUND	DIRECTED SELF-STUDY	COMPUTER INTERACTION
Lack of integrated program (Borow, 1970; Venn, 1970)	Need for a comprehensive, sequential program incorporated in curriculum where possible. Should emphasize educational awareness, career awareness, self-awareness, and planning skills.	Testing programs cannot stand alone --must be coordinated with all relevant guidance activities.			Need for a series of sequential materials that can integrate career education across the school and from grade to grade.	Need for a comprehensive service including information on careers, colleges, financial aid, vocational-technical training, and jobs.
Insufficient understanding of special needs of minorities (Shaplin, 1966; Ginzberg, 1971b; National Advisory Council on Vocational Education, 1972)	Likely to be a continuing problem requiring special effort and conscious attention in program design.		Continuing need for publications directed to special needs and interests of various subgroups.			

TYPE OF SERVICE	CAREER-GUIDANCE OBJECTIVES			
	DEVELOP EDUCATIONAL AWARENESS	DEVELOP CAREER AWARENESS	DEVELOP SELF-AWARENESS	DEVELOP PLANNING SKILLS
PSYCHOMETRIC INSTRUMENTS		• Tests of vocational maturity (Crites, 1971)[e.g., 62] • Occupational information tests to measure understanding of requirements, status, income, etc. (Bachman, 1970) • Annual career-objective analysis for each student relating school performance to career possibilities (Feldman, 1971)	• Instruments to measure aptitude and competencies (Turnbull, 1968; Dillenbeck, 1969) [e.g., 50, 51, 58] • Interest inventories (Dillenbeck, 1969)[e.g., 54, 55, 56, 57, 61] • Self-scoring scales of values, temperament, and cognitive styles (Dillenbeck, 1969) • Tests to match student characteristics with job demands and environmental characteristics of world of work (Samler, 1971) • Snort, sequential tests (aptitude, interest) to determine value of further testing (Goldman, 1964) • Instruments which measure normative aspects of individual characteristics	• Criterion-referenced tests of planning skills • Testing programs in which students have role in choice of tests and interpretation of results (Brim, et al., 1969; Goldman, 1971)
PUBLISHED GUIDES	• Identification of postsecondary opportunities [e.g., 1-25] • Description of what college is like from student viewpoint [e.g., 4, 11] • Guides that stress vocational relevance of postsecondary education	• Descriptions of individual jobs [e.g., 30-34] • Better occupational classification system than that provided by Dictionary of Occupational Titles [32]--more functional, flexible, and easily understood (Shartle, 1964) • Relevant job guides--particularly for terminal and disadvantaged students (Barry and Wolf, 1962; Ginzberg, 1971b) • Appropriate reading level (Ginzberg, 1971b)		• How-to guides on financing education (e.g., Keeslar, 1969) • How-to guides on continuing education (e.g., Thomson, 1972) • How-to guides on going to college [e.g., 14] • How-to guides on getting and keeping a job (Shaplin, 1966) • How-to guides on federal assistance for postsecondary programs (military, civil service, college) [e.g., 17] • How-to guides on apprenticeship, unions, and on-the-job training [e.g., 41]

Chart 2b. Prescription — Recommended Program Components

TYPE OF SERVICE	CAREER-GUIDANCE OBJECTIVES			
	DEVELOP EDUCATIONAL AWARENESS	DEVELOP CAREER AWARENESS	DEVELOP SELF-AWARENESS	DEVELOP PLANNING SKILLS
COMPUTER TURNAROUND	• Locater service for post-secondary education programs [e.g., 26] • Locater service for vocational training programs	• Master occupational information storage and retrieval center whereby completion of a form reflecting aptitudes, interests, and educational level supplies information on groups of suitable jobs (Shartle, 1964) • Computer feedback of local job openings [e.g., 46]		• Need analysis • Availability of massive, up-to-date occupational information made possible by data storage and retrieval (Cooley, 1965)
DIRECTED SELF-STUDY	• Description of what college is like • Discussion of how education relates to the world of work • Education related to change in kinds of job opportunities that will be available in the next few years (e.g., technological, semiskilled, government service) (Burkett, 1972)	• Description of job clusters (Hoyt, et al., 1972) • Description of "career ladder" approach (Riessman and Popper, 1968) • Discussion of psychosociological characteristics of jobs (Samler, 1971) • Discussion of unions, civil service, military, and vocational training • Discussion of career opportunities in order to broaden student's knowledge and prevent development of negative attitudes toward certain jobs (Borow, 1966) • Individual learning packages (self-paced) (Somers and Little, 1971) [e.g., 103]	• Guidance workbook containing information, questions, and self-study exercises dealing with student concerns such as alternatives to college, improving study skills, and learning about occupations that relate to individual interests and abilities (Dillenbeck, 1969) • Development of favorable attitudes toward personal, psychological, social, and economic aspects of work (AVA position) (Burkett, 1972)	• Instruction in decision-making skills (Dillenbeck, 1969) [e.g., 68, 72] • Understanding of sequential nature of choices (Katz, 1963; Hansen, 1970) • Understanding of consequences, risk-taking (Katz, 1963; Hansen, 1970) • Role-playing, simulation, and games to provide "reality" experience (U. S. Dept. of Labor, 1967; Borow, 1970) [e.g., 67, 69] • Combination of test-score profile, interest-inventory profile, and student workbook to aid in interpretation
COMPUTER INTERACTION	• Computer as mediator in process of career development--supplies educational information and mediates choice behavior (O'Hara and Tiedeman, 1971)	• Computer as mediator in process of career development--supplies career information and mediates choice behavior (O'Hara and Tiedeman, 1971) • Provision of current information on local job openings [e.g., 100] • Description of world of work (Rhodes, 1970) • Display for student his many potentialities and how his career possibilities change as his abilities and motives change (U. S. Office of Education, 1969)	• Diagnostic function--spot unrealistic career plans early (Cooley, 1965) • Assistance in self-evaluation [e.g., 57]	• Simulated decision-making to develop skills (U. S. Office of Education, 1969) • Training in career-planning skills (Katz, 1969) [e.g., 70]

Chart 2b. Prescription—Recommended Program Components

TYPE OF SERVICE	CAREER-GUIDANCE OBJECTIVES			
	DEVELOP EDUCATIONAL AWARENESS	DEVELOP CAREER AWARENESS	DEVELOP SELF-AWARENESS	DEVELOP PLANNING SKILLS
SCHOOL AND COMMUNITY PROGRAMS	• Traditional programs: parent workshops, college night, college open house, group guidance sessions	• Integration of career development in curriculum (Tennyson, 1965; Hoyt, et al., 1972) (e.g., Rhodes, 1970; Task Force on High School Redesign, 1971; [103]) • Multimedia resource center of career materials (Ginzberg, 1971b) [e.g., 86] • Use of community resources in orienting students to world of work (National Vocational Guidance Association, 1966; Hansen, 1970) • Expansion of work experience programs (National Vocational Guidance Association, 1966; Tyler, 1968; Venn, 1970) [e.g., 99] • Work adjustment program for dropout prone (Shaplin, 1966; e.g., Rhodes, 1970)	• Traditional personal counseling • Invited lectures on "life styles"	

FUNCTIONS OF TECHNOLOGY IN GUIDANCE	GOALS	SERVICES	CURRENT STATUS	LIKELY DEVELOPMENTS	EXAMPLES
COMPUTER-BASED					
VOCATIONAL INFORMATION	Provide up-to-date information on general and specific career opportunities and on student career interests (see U. S. Office of Education, 1969)	• Help counselor know students' career interests • Provide instant access to job description information • Provide information on specific job openings • Match occupations with interests and abilities • Provide supply-and-demand data • Suggest new occupational areas for exploration	Considerable experimentation done, but school districts slow to pick up workable models despite widespread acknowledgment of utility	County/state manpower agencies will move toward integrated listings of job openings; school districts will begin to develop, albeit slowly, interactive systems for usage of both counselors and students	CVIS [100] VGIS [46] OTIS [45]
EDUCATIONAL INFORMATION	Provide information on a range of postsecondary education alternatives, seeking to match individual interests and abilities with institutional offerings and environment	• Information on institutional programs and characteristics • Allow student to weigh characteristics according to importance to him • Give student list of institutions that match his indicated abilities and interests • Provide probability statements on chances for admission	Although a large number of national college locater services were established in the 1960s, very few exist now. A few interactive systems are in operation around the country, but they touch very few students so far	Students increasingly will seek information on a variety of postsecondary education options, not just colleges. Further, they will seek them in conjunction with information about specific careers	CLS [26] CVIS [100] ECES [78]
TRAINING IN PLANNING SKILLS	To increase competence in the process of making informed and rational career decisions (see Katz, 1969)	• Cause students to examine their values • Enable them to interpret relevant data accurately • Lead them to explore options systematically • Help them formulate and test tentative plans	Largely in the experimental stage, but some projects that did produce operational systems are currently shelved (e.g., ISVD; see Vriend, 1970; O'Hara and Tiedeman, 1971)	By and large secondary school systems will probably utilize written materials and gaming techniques rather than computerized systems	SIGI [70] is probably the best example, even though it is geared primarily for community college students
ACADEMIC ADVISING	To help students plan their academic programs in line with expressed interests, abilities, and career goals	• On-line course registration • Long-range course planning • Interpretation of past achievement and test scores in light of expressed interests and goals • Predict chances for admission and likelihood of success at selected postsecondary institutions	There has been considerable experimentation in each of these service areas over the past 5 years, but currently most operations are located within postsecondary institutions	Secondary schools will tie into and profit from current university experimentation, particularly with respect to course registration and planning	Broward Junior College (Florida) CVIS [100]

FUNCTIONS OF TECHNOLOGY IN GUIDANCE	GOALS	SERVICES	CURRENT STATUS	LIKELY DEVELOPMENTS	EXAMPLES
COUNSELING	To provide a system that would sensitively listen to counselee, analyze communications, and respond appropriately (see Super, 1970)	• Privileged communication to facilitate openness • Bring objective information about the student to bear on the problem or issue • Take student through systematic, analytical process	Not much going on	Not much in the near future	AUTOCOUN was one of the best examples, but it was an experimental project; funding ended in 1968 (see Super, 1970)
EDUCATIONAL MONITORING	To keep an up-to-date record of progress of students toward personalized, stated goals	• Provide information on a student's background, academic progress, test results, nature and frequency of contacts with professional staff, and other variables • Aid student in career planning through use of above information • Enable professional staff to monitor individual and group progress and spot problem areas	Early in developmental stage; most interesting projects are part of total individualized instruction systems; staff rather than students are primary users of information currently	Although total individualized educational systems will probably be several years in coming, various elements of students' records will increasingly be stored in a computer in easily retrievable form	PLAN [106] is a total individualized educational development system, one of the very few in operation See also Hughson (California) School District [103]
OTHER MEDIA (e.g., film, microfilm, videotapes, telephone systems, simulations, aperture cards)					
VOCATIONAL INFORMATION	To provide students with concise but thorough information about the nature of local job opportunities and the necessary access procedures (see Hoppock, 1967)	• Give detailed information on job openings, earnings, requirements, employer addresses, the nature of the actual work performed, etc. • Provide taped interviews with those in fields of interest • Make available data on supply and demand • Students investigate job areas by making their own films or videotapes	The VIEW system [47] using IBM-type aperture cards and written reports is being adopted throughout California and within other states. Also, a variety of other local and county systems are underway throughout the nation	• The need for localized specific career information is widely recognized; usage of programs and materials that meet this need will spread rapidly • Commercially prepared material will expand, but student prepared materials probably will come about very slowly	San Diego Career Guidance Centers [108] provide several services including VIEW and Dial-a-Career
EDUCATIONAL INFORMATION	Identify and describe those institutions that have programs and characteristics suited to a student's interests, abilities, and career goals	• Information on institutional programs and characteristics • Provide "humane" descriptions of institutional environments	Although many institutions have produced films about themselves, they are intended for large presentations or for general audiences, and therefore are used infrequently as a source of educational information by potential applicants. Most information continues to come to students from books and pamphlets [see 1-25]	Insofar as educational information is related to career-information programs, the primary development will be describing career-training programs and local institutional offerings	

FUNCTIONS OF TECHNOLOGY IN GUIDANCE	GOALS	SERVICES	CURRENT STATUS	LIKELY DEVELOPMENTS	EXAMPLES
TRAINING IN PLANNING SKILLS	To increase competence in the process of making informed and rational career decisions	• Motivate students to examine values and behaviors • Assist them in interpreting relevant data accurately • Lead them to explore options systematically • Help them formulate and test tentative plans	Noncomputerized programs are both less expensive and more flexible than computerized systems and as such seem to have greater appeal	Gaming techniques that combine training in planning skills with specific vocational and educational information will likely become prominent nationally	Life Career Game [69] (Boocock, 1967) Also, the Career Decision-Making Program [73] under development at the Appalachia Education Lab
ACADEMIC ADVISING	To help students plan their academic programs in line with expressed interests, abilities, and career goals (see Task Force on High School Redesign, 1971)	• Long-range course planning • Interpretation of past achievement and test scores in light of expressed interests and goals	Most noncomputerized advising uses either cards or paper and pencil instruments	Probably paper and pencil instruments and face-to-face contact will continue as the primary noncomputerized means of advising	
COUNSELING	To provide a systematic process by which students can undertake self-examination	• Take student through systematic analytical process of self-examination by means of videotapes or audiotapes	Not much going on	Not much in near future	
EDUCATIONAL MONITORING	To keep up-to-date record of progress of students toward personalized, stated goals	•Provide information on a student's background, academic progress, test results, nature and frequency of contacts with professional staff, and other important variables •Aid to student career planning through use of above information •Enable professional staff to monitor individual and group progress and spot problem areas	These systems can be organized to perform similar services as computerized systems, but on a less complex level; those parts of the system that are typical record-keeping are operational, but are available primarily for administrative use rather than student planning; microfilm is being increasingly used for these purposes	More widespread development of these systems, both for students and professional staff	

PROGRAM	OBJECTIVES AND SCOPE	FUNDING	SHIFTS IN OBJECTIVES AND TRENDS	LOCUS OF DECISIONS	EXAMPLES
Elementary and Secondary Education Act of 1965; Title IV - Project Research	Basic and applied research and development to improve teaching and learning. Very little of project research dollars appears to have gone into guidance	Grants to institutions and agencies. FY71 project research - $15 million; FY71 small grants research - $2 million	This money has become a major instrument for the career-education emphasis providing $13 million of the total $86 million allocated for this purpose from 1969-72	Office of Education, state education agencies. Small project (regional) research has apparently been pulled back to OE in Washington	See examples under "R & D Centers" (next row). Some of these are partially funded under project research
Elementary and Secondary Education Act of 1965; Title IV - Research and Development Centers, Regional Laboratories, and ERIC system	Basic and applied research, dissemination, and formulation of "products" which can be implemented by educational agencies. No mandated guidance activity. Several R & D centers have had guidance projects. Until recently, none has defined itself as especially concerned with guidance. ERIC system includes ERIC/CAPS at University of Michigan, which is a guidance-information center	Regional labs, FY72 - $25 million. Both R & D centers and regional labs seek additional funding - public or private	Career-education emphasis has had major impact on labs and R & D centers. A significant share of the total FY72 $25 million is going to career-education research and model development, channeled through 5 of the 15 regional labs and 3 of the 13 R & D centers	Centers are autonomous; funding decisions are made at OE, and used to influence lab objectives	Operation Guidance [80] Career Decision-Making Program [73] Comprehensive Career-Education Model (School-Based) [92] Employer, Home, and Community-Based Career-Education Models [93]
Education Professions Development Act; Part D	To increase the supply of well-qualified pupil personnel specialists and to improve preservice and inservice training programs	Participating institutions of higher education, local educational agencies, etc. FY71 - $4 million (est.)	EPDA has been cut back. However, $.5 million of EPDA funds are being used to support career-education projects in 11 states	Bureau of Education Personnel Development, EPDA Coordination, Regional Office of Education	Funding has been curtailed
Elementary and Secondary Education Act of 1965; Title I	To expand and improve educational programs for children in low-income areas. Special sections on (1) migrant children, (2) neglected or delinquent children, (3) Indian children in federal schools, (4) handicapped children. Counseling is a specified purpose of this legislation, though counseling's share of the funds is small	FY72 - $1 million for basic program to local agencies. $61 million for migrant children	States appear to have shifted emphasis to primary level, and away from counseling and guidance activities (to reading and math)	State education agency (compensatory education), OE division of compensatory education	San Diego Unified School District Guidance Programs for ESEA-Title I, Targeted School [82]

PROGRAM	OBJECTIVES AND SCOPE	FUNDING	SHIFTS IN OBJECTIVES AND TRENDS	LOCUS OF DECISIONS	EXAMPLES
Elementary and Secondary Education Act of 1965; Title III	To assist in provision of vitally needed educational services and to support innovative projects. Guidance component must be no less than 50% of dollars funded for NDEA, Title V-A in FY70	Local public and private schools. FY72 $146 million. Proportion spent on guidance and counseling appears to be less than 10%; 15% of funds allocated at discretion of commissioner presently going to early childhood education	ESEA Title III absorbed NDEA, Title V-A (guidance counseling and testing) which shifted emphasis of those funds to innovation. States appear to be shifting emphasis to (1) basic instruction, and (2) elementary education. A large number of current projects and applications in guidance activities stress career guidance	State education agency (Title III Office); OE Division of Plans and Supplementary Centers	A Systems Approach to Vocational Guidance (Culver City Unified School District, California) [83] Field Testing of a Comprehensive Achievement Monitoring System (Sequoia Union High School District, California) [79]
Elementary and Secondary Education Act of 1965; Title VIII	Grants to local public education agencies for the development and demonstration of guidance programs especially for (1) vocational choice and (2) affective development. Mandate of innovative practices suggests expansion of traditional counseling role	Schools with high percentage of (1) low-income students (family income less than $3,000 per year) and (2) dropouts. FY72 - $10 million		OE Department of Dropout Prevention (Division of Plans and Supplementary Centers); State education agencies (Program Planning and Development Division)	Dropout Prevention Projects in Baltimore, Paducah, and Louisville [77]
Manpower Development and Training Act of 1962, as amended	To provide training and retraining experiences for unemployed and underemployed persons in business, schools, or private agencies. Sponsored guidance activities appear traditional, focusing on reducing counselor loads to insure more individualized counseling	FY71 exceeded $600 million	Traditional emphasis has been on out-of-school persons though schools have contracted to do some of the training. Some projects are now experimenting with in-school youth	OE and State Office of MDT; U. S. Training and Employment Service, Office of Manpower Development	MDTA projects appear to have a very limited application to schools
Vocational Education Amendments of 1968; Byrd Amendment to Cooperative Research Act. Vocational Education-Innovation ($9 million Discretionary Funds to States)	The development of career-education models in K-Adult: to integrate academic/general/vocational education; guarantee the student saleable skills at exit, give students broad exposure to career-vocation options, maximize placement, provide evaluation of outcomes. Marland's directives designate 25% of discretionary funds for guidance	Selected school districts FY72 - $9 million: $7 million from Part C of Vocational Education Act and $2 million from Byrd amendment which mandates counseling component		State Bureau of Vocational and Technical Education	City of Eau Claire (Wisconsin) Career Education, Kindergarten through Adult Experimentation Project [74]

PROGRAM	OBJECTIVES AND SCOPE	FUNDING	SHIFTS IN OBJECTIVES AND TRENDS	LOCUS OF DECISIONS	EXAMPLES
Vocational Education Amendments of 1968; Title I, Parts B, C, D	Through grants to states, assist all communities in conducting vocational-education programs, guidance and counseling, construction, etc. Also, (Part C) research, training, demonstration of pilot programs and (Part D) exemplary programs to insure each student has a marketable skill upon leaving school	For all persons in all communities who seek and desire vocational education. 10% handicapped, 15% disadvantaged, 15% postsecondary programs. FY72 - $486 million	Concept of vocational education is being replaced by career education which is broader in terms of objectives, educational level (K-Adult), and the intended integration of academic, general, and vocational education. Past minimization of guidance function appears to be changing. Vocational Education Act of 1968 supposedly shifts emphasis from categories of occupations to categories of people	State Board of Vocational Technical Education - OE Division of Vocational and Technical Education	Maryland Career Development Project [80]

MATERIAL	PURPOSE	CONTENT	FORMAT/COST	PRIMARY TARGET	COMMENTS
1 AMERICAN JUNIOR COLLEGES Edmund J. Gleazer Jr. (Ed.) American Council on Education	Standard reference describing characteristics of all U. S. 2-year colleges that are either accredited or candidates for accreditation	Provides comprehensive academic and financial information including numerous statistics; also brief essays on the organization of community colleges in each state	Approximately one page per college; material factual and concise, but not cryptic; separate sections for public and private colleges Cost: $18	Reference	Every 4 years 2-year counterpart to American Universities and Colleges [3] Basic reference in field
2 AMERICAN TRADE SCHOOLS DIRECTORY Croner Publications	Guide to public and private trade, industrial, and vocational schools	Names and addresses provided for 4,500 schools in more than 250 trades. Classified by trade, state, and city	Looseleaf guide Cost: $12	Counselors	Monthly supplements
3 AMERICAN UNIVERSITIES AND COLLEGES Otis A. Singletary (Ed.) American Council on Education	Authoritative, detailed information on accredited 4-year colleges and universities	Data ranges from descriptions of student life to departmental offerings, faculty size, and enumeration of sources of income; also describes types of professional education and lists colleges offering training in each area	Institutions listed and described alphabetically within states Cost: $22	Reference	Every 4 years Standard reference for all accredited 4-year colleges and universities in the U. S.
4 APPROACHING STANFORD Stanford University	To present a realistic look at life at Stanford, including the types of information incoming freshmen really want to know	Includes many standard college catalog features, but produced by freshmen with an informal "life is more than books" style	Coupled with the factual material are quotations from students on every aspect of student life	Prospective students and particularly incoming freshmen	Annual One of the best efforts to present a realistic picture of college life
5 BARRON'S COLLEGE PROFILES IN-DEPTH Barron's Educational Series	Comprehensive analysis of 150 American colleges and universities	Institutions described and assessed	Series of 150 booklets averaging 20 pages each Cost: $1.50 each	Students and counselors	Some of the Profiles may be a bit dated
6 BARRON'S GUIDE TO THE TWO-YEAR COLLEGE Seymour Eskow	Factual information on 859 2-year colleges, including vocational and technical institutions	Information such as admissions requirements and procedures, program offerings, and costs; also chapters on topics such as "Why Go to College?" and "How to Study Effectively"	Single volume Cost: $5.95 Paperback, $3.50	Students and counselors	

MATERIAL	PURPOSE	CONTENT	FORMAT/COST	PRIMARY TARGET	COMMENTS
7 BARRON'S PROFILES OF AMERICAN COLLEGES Benjamin Fine	Directory containing descriptions of all accredited 4-year colleges and universities	Lengthy descriptions which are basically factual, but portray each institution's academic and social environment. Also listing of colleges grouped according to academic selectivity	Single volume Institutional descriptions alphabetical by state Cost: $9.95 Paperback, $4.95	Students	Annual
8 CHOOSING A COLLEGE John C. Hoy	Description of the admissions process	Discusses how colleges weigh test scores and high school records; information on interviews; what colleges look for in application autobiographies and how student can evaluate a college community	Single volume Cost: 75 cents	Students	
9 THE COLLEGE BLUE BOOK Christian E. Burckel	Provides variety of information on nearly 3,500 accredited and nonaccredited 2- and 4-year institutions in the country	Categories of information include institutions, majors, financial aid, study abroad, secondary schools, and accreditation	10-volume directory Cost: $99	Reference	Revised every 3 years, some sections updated annually; uneven quality
10 THE COLLEGE HANDBOOK College Entrance Examination Board	Self-descriptions of more than 2,000 2- and 4-year colleges in all parts of the U. S.	Information on curriculums, admissions, student life, expenses, and financial aid; also tables describing admissions test scores and high school grades of recent applicants and enrolled freshmen	2 volumes College descriptions listed alphabetically by state Cost: $9.50	Students and counselors	Unique features of this handbook include tabular information on test scores and state maps showing college locations
11 THE COLLEGE STUDENT'S HANDBOOK Abraham Lass and Eugene Wilson	Identifies and discusses academic, financial, and social problems facing college students	Description of what to expect from college and suggestions on what to do after arriving on campus	Single volume Cost: $2.65	Students	Written especially for college-bound high school students
12 COMPARATIVE GUIDE TO AMERICAN COLLEGES James Cass and Max Birnbaum	Narrative descriptions of all accredited 4-year colleges in the nation	Provides information on admissions requirements, academic environment, campus life, and costs; also colleges are categorized according to a selectivity index.	Single volume Institutions listed alphabetically Cost: $10 Paperback, $4.95	Students and counselors	Every other year Well-organized and well-researched; one of the best college guides prepared especially for students and counselors

MATERIAL	PURPOSE	CONTENT	FORMAT/COST	PRIMARY TARGET	COMMENTS
13 COMPARATIVE GUIDE TO TWO-YEAR COLLEGES AND FOUR-YEAR SPECIALIZED SCHOOLS AND PROGRAMS James Cass and Max Birnbaum	To provide information on both 2-year colleges and on selected baccalaureate programs in visual, performing, and communicative arts	Descriptions of residential colleges similar to American Junior Colleges [1]; abbreviated descriptions of nonresidential colleges; also commentaries on and descriptions of admissions requirements and expenses for specialized schools and programs	Single volume Separate listings for nonresidential 2-year colleges and specialized schools and programs Cost: $7.95 Paperback, $3.50	Students and counselors	Particularly valuable for extensive information on specialized programs and unique data on percentages of students in 2-year college terminal and transfer programs
14 COMPLETE PLANNING FOR COLLEGE Sidney Sulkin	To provide specific advice on choosing a college and preparing for college entrance	Discussions on a wide range of subjects from "How to Prepare for College" to "What to Expect in College"	Single volume organized into 22 chapters of narrative, plus tables Cost: $6.95	Students	As useful to counselors as to students and parents because of its factual base and number of references to further sources of information
15 DIRECTORY OF TRADITIONALLY BLACK COLLEGES AND UNIVERSITIES IN THE U.S.A. United Negro College Fund	To provide selected information on 85 traditionally black 4-year institutions located primarily in the Southeast	Includes listing of administrative staff at each college and a listing of all degrees offered with an enumeration of students receiving each degree	Single-page descriptions of institutions in chart form Cost: $1	Reference	Published at irregular intervals
16 EDUCATION DIRECTORY, 1971-72: HIGHER EDUCATION U. S. Office of Education, National Center for Educational Statistics	To list and provide information on virtually all higher education institutions recognized by U.S.O.E. in 1971-72	Information on location, control, program offerings, and accreditation status; also name and title of each administrative officer	Single volume Institutions listed alphabetically by state Cost: $3.75	Reference	Annual Only national directory with such complete information; first printing reproduced from computer printout for early availability
17 FEDERAL DOLLARS FOR SCHOLARS Henry Toy Jr.	To describe a large number of federal career-training programs available through diverse agencies	Provides information on purpose, eligibility requirements, application procedures, and support available for each program	Single volume Cost: $4.20	Students, parents, and counselors	
18 HANDBOOK OF PRIVATE SCHOOLS Porter Sargent	Information on 1,000 independent secondary schools in 49 states, based on an annual survey	General information on all institutions in abbreviated statistical form, and short paragraph describing unique characteristics of each school.	Cost: $14	Students and parents	

MATERIAL	PURPOSE	CONTENT	FORMAT/COST	PRIMARY TARGET	COMMENTS
19 HOW TO GET INTO COLLEGE F. Bowles, C.R. Pace, and J. Stone	To answer 373 questions usually asked by students and parents about college and college admissions	Chapters on testing, college choice, finance, and such issues as studying abroad and relationship of college to military service	Single volume Question and answer format Cost: $4.95	Students and parents	Popular and useful
20 INTERNATIONAL HANDBOOK OF UNIVERSITIES AND OTHER INSTITUTIONS OF HIGHER EDUCATION H.M.R. Keyes and D.J. Aitken	Authoritative reference for information about universities and other institutions of higher education throughout the world, not including the British Commonwealth or the U. S.	Covers institutions in 104 countries and territories; brief descriptions of academic offerings, history and structure, admissions requirements, degrees and diplomas offered, and size of faculty and student body	Single volume Individual entries presented alphabetically by country Cost: $16	Reference	Every 3 years Indispensable source of information for international higher education; only reference of this type in English language
21 JUNIOR COLLEGE DIRECTORY William A. Harper (Ed.) American Association of Junior Colleges	Directory of information on 2-year colleges	Lists characteristics, enrollment, and student expense information for all approved, nonprofit, 2-year colleges in the nation	Single volume Provides statistical information for over 30 colleges on a single page Cost: $2	Reference	Annual Most current publication of its type
22 LOVEJOY'S CAREER AND VOCATIONAL SCHOOL GUIDE Clarence E. Lovejoy	To provide orientation to vocations not requiring traditional academic degrees	Provides lists of organizations, vocational institutions and curriculums, opportunities in armed services, apprenticeships, etc.	Extensive listings of careers and schools, and lengthy index Cost: $3.95	Students and counselors	
23 LOVEJOY'S COLLEGE GUIDE Clarence E. Lovejoy	To provide information on more than 3,200 American colleges and universities	Factual information on institutions, and a listing of all colleges offering programs in each of nearly 500 career fields	Single volume Institutions listed alphabetically by state Cost: $7.50 Paperback, $3.95	Students	Biennial Minimal information on smaller institutions or community colleges
24 NEW AMERICAN GUIDE TO COLLEGES Gene R. Hawes and Peter N. Novalis	Statistical data on more than 3,600 accredited and nonaccredited colleges	Extremely abbreviated statistical information on all phases of college including residence facilities, admissions, curriculum, etc.	Single volume Institutions listed alphabetically by state Cost: $17.50 Paperback, $1.95	Students and counselors	Seems most useful for initial screening of colleges or for research
25 THE NEW YORK TIMES 1972 GUIDE TO COLLEGE SELECTION Ella Mazel	To permit student to quickly select from among nearly 1,400 4-year institutions those few that match his abilities, goals, and interests	Colleges organized by cost, selectivity, size, and location with additional information on specialized curriculums, transfer requirements, commuter/resident ratio, etc.	Single volume Institutions organized in charts by standard characteristics Cost: $4.95	Students and parents	Annual Formerly Colleges at Your Fingertips; unique approach to college selection

MATERIAL	PURPOSE	PROCEDURE	CHARACTERISTICS	NATURE OF OUTPUT/ COST	COMMENTS
26 COLLEGE LOCATER SERVICE (CLS) College Entrance Examination Board	To provide initial screening of colleges	Student completes questionnaire to express his preferences as to such college characteristics as geographic location, enrollment, curriculums, and student activities; questionnaire also asks students to rank characteristics in order of their importance to him	Information on most recognized 2- and 4-year colleges and universities	Report sheet with capsule information on as many as 40 colleges Cost: $9	To be operational in 1972-73
27 NATIONAL COLLEGE SELECTOR West Haven, Connecticut	To provide initial screening of colleges	Student completes questionnaire which requests information on scholastic record, attitudes toward school policy, achievements and activities, college characteristic preferences, and finances; college characteristics are weighed by the student according to their importance to him	Information on more than 2,500 universities, colleges, and technical schools	A list of 10 colleges Cost: $15	
28 SELECT Harcourt Brace Jovanovich, Inc.	To provide initial screening of colleges	The student questionnaire asks more than 300 questions concerning the type of college desired, personal data, student aptitudes, high school grades, and college entrance test scores; many of the questions are weighted	Information is stored on a total of 3,000 colleges	A list of 10-15 colleges Cost: $15	A copy of the list is sent to the student's counselor

NOTE: Of the 16 locater services we originally identified, 13 have either gone out of business or did not respond to our queries for information.

MATERIAL	PURPOSE	CONTENT	LENGTH/COST	PRIMARY TARGET	COMMENTS
29 APPRENTICE TRAINING: SURE WAY TO A SKILLED CRAFT U.S. Department of Labor	To provide a list of 79 occupations and the number of years apprenticeship training required for each	Pay scales, veterans' benefits, addresses of regional offices of U.S. Department of Labor Bureau of Apprenticeship and Training and nationwide apprenticeship centers	8-page pamphlet Cost: 15 cents	Young adults	
30 B'NAI B'RITH OCCUPATIONAL BRIEF SERIES B'nai B'rith Vocational Service	To provide general career summaries	Information includes history, nature of work, fields of specialization, requirements, employment outlook, earnings, schools, where to obtain additional information, etc.	Series of booklets Cost varies	High school students, college freshmen and sophomores	Comprehensive, interesting, and readable
31 CAREER FACTS U.S. Department of Labor	To give descriptions of over 400 jobs and careers requiring education beyond high school and/or extensive experience	Job descriptions, training and other requirements, pay scales, and sources of information are given for each career	299-page volume Cost: $4	High school students and older	Well-organized, easy-to-use guidebook. There is a companion volume, Job Facts, that deals with jobs for those with only some high school education
32 DICTIONARY OF OCCUPATIONAL TITLES U.S. Department of Labor	To give definitions of more than 20,000 occupations	Definitions, various job classifications, information on physical demands, working conditions, training-time data, etc.	2 volumes Cost: $14.50	Students, counselors, and other adults	A standard source of occupational information since 1939
33 EDUCATION AND JOBS U.S. Bureau of Labor Statistics	To provide a summary of the 700 occupations in 30 major industries that are listed in the Occupational Outlook Handbook [40]	Set of 5 charts which summarize by occupation the qualifications and training needed, employment opportunities and trends, and the number of people employed	Set of 5 fold-out leaflets Cost: $1 per kit	High school students of all ability and interest levels	Charts arranged according to level of education or training required
34 THE ENCYCLOPEDIA OF CAREERS AND VOCATIONAL GUIDANCE William E. Hopke	To provide extensive information on jobs in all areas	Volume I gives guidance information and information on major career areas; Volume II contains 220 articles covering 650 specific jobs	2 volumes Cost: $30	Junior and senior high school students and young adults	Includes useful bibliography and sources of additional information on specific jobs
35 GUIDANCE INFORMATION SYSTEM Interactive Learning Systems	Students guided by prepared materials to communicate with ILS computer in Boston via teletypewriter terminal	Provides information on occupations, vocational and technical schools, colleges and universities, and scholarships and financial aid	Computerized data retrieval Cost: Averages about $4 per month/student	Junior and senior high school students	Counselor and student work together. Has been used in several hundred school systems nationally

MATERIAL	PURPOSE	CONTENT	LENGTH/COST	PRIMARY TARGET	COMMENTS
36 GUIDE TO CAREERS THROUGH VOCATIONAL TRAINING E.A. Whitfield and R. Hoover	To provide job descriptions for careers requiring no more than 2 years of post-high school training	Job descriptions, requirements and qualifications, preparation and training, employment outlook, and wages in the 4 major geographic regions	Single volume Cost: $5.95	Vocationally oriented high school students	Useful and well-organized
37 JOB EXPERIENCE KITS Science Research Associates	To provide simulated work experiences in 20 occupations	Short exercises constructed as games that present job activities simple enough so students will experience success; kits are self-contained and include required tools and materials	Length varies from kit to kit Cost: $130 for 20 kits	Students in grades 8-10	In effort to be interesting, job tasks are not always realistic
38 JOB GUIDE FOR YOUNG WORKERS U.S. Department of Labor	To provide occupational briefs for 150 jobs	Usual activities, job characteristics, qualifications, employment prospects, advancement opportunities, and application procedures	Single volume Cost: $1.50	Adults	Occupational briefs are organized graphically. Published annually
39 OCCUPATIONAL EXPLORATION KIT Science Research Associates	Students indicate education plans, ability levels, and interests, and receive personalized job exploration possibilities	Student uses system of overlapping punched cards covering his education, abilities, and interests to lead him to particular groups of occupational briefs, guidance booklets, and job family booklets	Booklets on job families, occupational briefs, and a series of Occu-Scan cards indicating suitable job areas	Senior high students	Little counselor assistance necessary
40 OCCUPATIONAL OUTLOOK HANDBOOK U.S. Bureau of Labor Statistics	To provide the latest information on over 700 occupations	For each brief there is information concerning the nature of work, training requirements, earnings and working conditions, employment outlook, and sources of additional information	Single volume Cost: $4.25	Adults and counselors	Widely used and current. Additional materials include the Occupational Outlook Quarterly and Occupational Outlook Reprint Series
41 ON THE JOB TRAINING AND WHERE TO GET IT Robert A. Liston	To give descriptions of on-the-job training opportunities	Chances and prospects for employment in different industries, descriptions and predictions of the needs for certain skills	Single volume Cost: $3.95	Career-seeking high school graduate	
42 SRA CAREER INFORMATION KIT Science Research Associates	To provide a comprehensive library of occupational materials	Job exploration section, counseling materials, user's guide, and 20 student instruction sheets	Approximately 600 pieces of literature Cost: $215	Students in grades 9-14	Cross-referenced according to Dewey decimal library system

MATERIAL	PURPOSE	CONTENT	FORMAT/COST	PRIMARY TARGET	COMMENTS
43 CALIFORNIA LABOR SUPPLY AND DEMAND SUMMARY California Department of Human Resources Development	To give information on surpluses and shortages within various occupational groups	Pamphlets list, by geographic areas, those occupations for which there are either surpluses or shortages	Monthly pamphlets	Adults; used in counseling at local Human Resources Development offices	
44 OCCUPATIONAL GUIDES California Department of Human Resources Development	To provide general descriptions of 460 occupations, about half of which are for people with some college training	Job duties, working conditions, employment outlook, salaries, training and entrance requirements, and promotion possibilities	Single sheets and short leaflets	California	Particularly useful for junior college vocational programs. Available at local Human Resources Development offices
45 OCCUPATIONAL TRAINING INFORMATION SYSTEM (OTIS) Oklahoma State Department of Education	To list supply and demand data for over 300 subprofessional occupations	Demand data is generated from contact with majority of businesses, and supply data is listed by source of training	Tabular report giving data on 11 subregions as well as Oklahoma as a whole	High school students and others interested in subprofessional occupations	The plan is to gather job demand data through direct interviews with virtually all of Oklahoma's businesses and industries
46 VOCATIONAL GUIDANCE INFORMATION SYSTEM (VGIS) Santa Clara County Office of Education California	To provide current, local information on the characteristics of jobs and job requirements	About 200 firms periodically report actual and projected job requirements and necessary personal characteristics; it is not intended to provide information on specific job openings	6 different reports for counselors and students, produced from computerized data bank	Junior and senior high school counselors and students	Exceptionally comprehensive and useful program providing accurate, up-to-date information; placement projection summaries for given fields are especially useful
47 VITAL INFORMATION FOR EDUCATION AND WORK (VIEW) San Diego County Department of Education California	To provide occupational information on local opportunities requiring less than a B.A.	Local and state listings of job availabilities, advancement opportunities, earnings, requirements, training programs, and employer addresses	Printed forms and aperture cards (VIEWscripts)	Numerous school districts throughout California	Developed in 1965; has received national recognition

MATERIAL	PURPOSE	CONTENT	LENGTH/COST	PRIMARY TARGET	COMMENTS
48 ACT CAREER PLANNING PROGRAM American College Testing Program	To provide students, counselors, and institutions with information about students' abilities, interests, and advisable vocational-technical curriculum	3 major sections: student information section, ability measures, and vocational interest profile	3 hours Cost: $6 per person	High school and community college students	Current and follow-up information provided for institutions
49 COMPARATIVE GUIDANCE AND PLACEMENT PROGRAM (CGP) College Entrance Examination Board	To aid 2-year colleges in curriculum guidance, to help students understand abilities and interests, and to help colleges identify students needing academic and personal help	Biographical inventory, comparative interest index, test sections on academic abilities	3-1/2 hours Cost: $3.75 per person	Beginning 2-year college students	Provides students and colleges with interpretive summary data and predictive data on student performance
50 DIFFERENTIAL APTITUDE TEST The Psychological Corporation	To aid counselors in occupational and vocational guidance	8 tests of fundamental intellectual abilities	2 half-day administrations Cost: 60 cents per person	Junior and senior high school students	Well-known and widely used
51 FLANAGAN APTITUDE CLASSIFICATION TEST (FACT) Science Research Associates	To identify vocational aptitudes	19 tests, including multiple choice items and manual dexterity tasks	Total battery--1-1/2 class days	High school and college students and adults	Student workbooks provided to help determine and understand scores and aptitudes
52 GENERAL APTITUDE TEST BATTERY U. S. Employment Service	To aid vocational counselors with occupational and vocational guidance	9 different aptitude measures such as numerical, manual dexterity, etc.; subdivided into about 400 specific aptitude tests	2-1/2 hours, although person may take only certain sections related to his interests	U. S. Employment Service Offices serve primarily adults	Given at virtually every U. S. Employment Service Office across the nation
53 HALL OCCUPATIONAL ORIENTATION INVENTORY Follett Educational Corporation	To help user understand what personal and psychological needs are as they relate to job choice and work satisfaction	Inventory which assesses personality needs, worker traits, and job content preferences	30 minutes Cost: 85 cents per person	Grades 7 through college	Scored and interpreted by counselor

MATERIAL	PURPOSE	CONTENT	LENGTH/COST	PRIMARY TARGET	COMMENTS
54 KUDER DD - OCCUPATIONAL INTEREST SURVEY Science Research Associates	To compare students' interests to those of typical people in various occupations and fields of study	For each of 100 groups of 3 job activities, individual chooses most preferred and least preferred	Approximately 30 minutes Minimum cost: 20 for $30	Grades 11 and 12 and adults	One of the most widely used vocational interest tests
55 KUDER E - GENERAL INTEREST SURVEY Science Research Associates	Basic measure of general interests; e.g., outdoor, mechanical, scientific, artistic	For each of 168 groups of 3 activities, the student chooses the most preferred and the least preferred	45 to 60 minutes Minimum cost: 25 for $8.45	Junior and senior high school students	Evolved from a series of vocational interest inventories which began in 1939
56 MINNESOTA VOCATIONAL INTEREST INVENTORY The Psychological Corporation	To measure interests related to semiskilled and skilled occupations	For each of 158 groups of 3 job activities, the individual chooses the most preferred and the least preferred	Approximately 45 minutes Cost: specimen set, $1	Males 15 years of age and older	Very similar to Kuder DD except for its occupational level of emphasis
57 OHIO VOCATIONAL INTEREST SURVEY Harcourt Brace Jovanovich, Inc.	To gather information on job and subject area preferences, academic and vocational plans, and occupational interests	Students indicate vocational interests and educational plans and then record the degree of preference for each of 280 job activities	Approximately 60 to 90 minutes	Grades 8-12	Based on the Dictionary of Occupational Titles [32] and thus is compatible with major occupational information resources
58 PSAT/NMSQT College Entrance Examination Board	For college guidance and scholarship purposes	Verbal and mathematical	2 hours Cost: $2.50 per person	High school juniors	National Merit Scholarship Corporation uses for scholarship purposes
59 SELF-APPRAISAL AND ASSESSMENT STRUCTURE Santa Clara County Office of Education, California	To help students understand how their abilities and interests relate to the world of work	Students rate interest and ability in 8 vocational fields and also rate their ability in areas of academic orientation, motivation, organization, and energy output	Approximately 1 hour	Grades 9-12	Self-administered and interpreted through the use of a student handbook; also provides a method of projecting occupational level from GPA, SAT scores, and responses on academic scales

MATERIAL	PURPOSE	CONTENT	LENGTH/COST	PRIMARY TARGET	COMMENTS
60 SELF-DIRECTED SEARCH Consulting Psychologists Press	To help students locate possible occupations for investigation according to abilities and interests	Ability and interest assessment inventory and occupations finder	20 to 50 minutes Cost: $1 per person	High school students and adults	Self-administered and self-interpreted. Can be used without counselor assistance Developed by John Holland
61 STRONG VOCATIONAL INTEREST BLANK Consulting Psychologists Press	To provide index of similarities between a person's interests and those of successful people in different occupations	8 sections wherein students indicate preferences for different activities, people, amusements, etc., and rate their own abilities and characteristics; separate forms for men and women	25 to 45 minutes Cost: 50 cents per person	Primarily for adults over 25, although authors give minimum age as 16	A very widely used interest inventory; often revised, but viewed by some as too traditional
62 VOCATIONAL DEVELOPMENT INVENTORY American Personnel and Guidance Association	To measure 5 types of vocational maturity: goal selection, occupational information, planning, problems, and self-knowledge	50 true/false statements about work and occupational choice; although 5 types of vocational maturity are measured, only one score is reported	10 to 15 minutes	Students in grades 7-12	Most useful for research purposes and evaluating program effectiveness Developed by John O. Crites
63 VOCATIONAL PLANNING INVENTORY Science Research Associates	To predict grades for subsequent courses in major vocational areas	Combines measures of general ability, aptitudes, achievement, and values to predict grades in 8 vocational areas	2-1/2 to 3 hours Minimum cost: 25 for $10.95	Vocationally oriented high school and post-high school students	Also provides estimates in overall grade averages for both vocational and academic subjects
64 WASHINGTON PRE-COLLEGE TESTING PROGRAM University of Washington	Designed as a guidance and planning tool to measure achievement; a cooperative enterprise of the high schools and colleges in Washington	Measures achievement in verbal skills, mathematics, mechanical reasoning, and spatial ability; scores used to predict success in college subject areas and vocational fields	5 hours	High school juniors throughout state of Washington	Basis for probably the most comprehensive statewide grade-prediction program in the nation
65 WORK VALUES INVENTORY Houghton Mifflin Company	To measure those values of particular importance to job satisfaction and vocational success	Inventory structured around 15 values such as way of life, altruism, creativity, and aesthetics; student rates each of 45 job-value statements according to importance to him	10 to 15 minutes Cost: 20 cents per person	Secondary or postsecondary school students	One of the newest and briefest inventories available Developed by Donald Super

MATERIAL	NATURE OF OPERATION	CONTENT	FORMAT/COST	PRIMARY TARGET	COMMENTS
66 CAREER DEVELOPMENT LABORATORY Educational Progress Corporation	Survey used to determine student's career and occupational interest areas; this then directs him to taped interviews in his interest area	Career survey and battery of 60 taped interviews with successful working people; 60 percent of interviews cover professional careers	Self-contained; may be used without supervision Cost: $210 for 60 tapes, 100 interviews, and teacher's guide	Grades 8-13	
67 CAREER GAMES Educational Progress Corporation	Semiprogrammed game takes individual on career search	398 career cards (which also suggest where to get more information on career), score pad, filmstrip, tape and counselor-teacher's guide	Self-contained instructional unit Cost: $74.50 for complete program	Grades 8 through junior college	Career cards are correlated with Career Development Laboratory [66]
68 DECIDING College Entrance Examination Board	Designed as course of study in group guidance or regular curriculum	Sections on values, information, and strategy offer illustrations of decision-making and lead student to understand complexities of decision-making	Student workbook Cost: $2.50 Leader's guide Cost: $2	Junior high school students	
69 LIFE CAREER GAME Western Publishing Company, Inc.	Simulation technique whereby teams of students attempt to plan the most satisfying life for a hypothetical student	Manual, cards, booklets, application forms, etc. Games currently available on Ghetto, Democracy, Consumer, Economic System, Life Career, and Generation Gap	Actual Parker Bros. type games Cost: Ranges from $8 to $35 per game, depending on the game	Junior and senior high school students	Has sparked considerable interest throughout educational community
70 SYSTEM OF INTERACTIVE GUIDANCE AND INFORMATION (SIGI) Educational Testing Service	Student proceeds in any one or in a combination of subsystems to discover and rank his options	4 subsystems: values, information, prediction, and planning	Computer interactive system Cost: If operational now would be $3 to $5 per terminal hour	Junior college students	Currently being field-tested; project scheduled to conclude May 1974
71 COMPUTER ASSISTED CAREER EXPLORATION SYSTEM (CACES) Pennsylvania State University	Provides individualized occupational information system as well as experience in acquiring by simulation strategies of relating abilities and interests to opportunities	Student receives written description of occupational area, taped interview with worker, and information on discrepancies between his ability-preference profile and occupational requirements	Computer interactive; student terminal includes typewriter-like device, tape recorder, and slide projector	Grade 9 students	Experimental effort; funding ended in 1968; led to follow-up longitudinal research on 9th-grade students for a 10-year period
72 YOU: TODAY AND TOMORROW Educational Testing Service	Decision-making program designed for 30 group guidance sessions	Sections on abilities, values, interests, occupations, education, and making choices; attention devoted to both substance and process of educational/vocational planning	Self-contained, 100-page student booklet Cost: $2 30-page teacher's guide Cost: $2	Grades 8 and 9	This 1½-year-old program represents a landmark in career guidance and incorporates many features only now becoming widely accepted

PROJECT	SCOPE	DEGREE OF PROGRAM INTEGRATION	MEDIA	CAREER-GUIDANCE OBJECTIVES			
				EDUCATIONAL AWARENESS	CAREER AWARENESS	PLANNING SKILLS	SELF-AWARENESS
73 APPALACHIA EDUCATIONAL LABORATORY CAREER DECISION-MAKING PROGRAM	Students in Appalachian region, K-12	Some materials designed for counselor use and others for integration into curriculum as units	Heavy use of tape, films, keysort	Curriculum units on school achievement and educational development	Curriculum units and materials such as VIEW [47] intended to take students through career awareness, orientation, and exploration	Decision-making materials include gaming and simulation	Self-test, self-profile, inventories, and check lists for student self-assessment
74 CITY OF EAU CLAIRE (WISCONSIN) CAREER EDUCATION KINDERGARTEN THROUGH ADULT EXPERIMENTAL PROJECT	All students K-adult; one of 10 pilot projects of Wisconsin State plan	This program appears to be integrated in terms of interrelationship of curriculum, counseling, and career education	No evidence of heavy use of technology	Program attempts to show interrelationship of work and education	Programs to increase career awareness begin at kindergarten, are intensified at grades 4-6, and expand into career exploration at junior high; placement after high school	Decision skills do not seem emphasized, though career planning is	Self-awareness is a stated objective at elementary level, but no procedures are specified
75 COBB COUNTY (GEORGIA) OCCUPATIONAL AND CAREER DEVELOPMENT PROGRAM	All students K-12	Goal of integration is specified; there is considerable integration of career education into curriculum, not of vocational with academic curriculum, or guidance with instruction		Effort to relate career patterns to educational patterns, and job skills to course work via career modules in most courses	Classroom information, field trips, and specific vocational education and cooperative work experiences	Rationale of decision-making is explicit in description of program; means of attainment is unclear	Self-awareness is a stated goal, but not well provided for; tests described evaluate knowledge of subject matter, not student interests
76 THE DETROIT DEVELOPMENTAL CAREER GUIDANCE PROJECT	Grades 1-12	Career-guidance activities are integrated into the regular curriculum of the schools			Curriculum components, assemblies, field trips, extensive involvement of parents and other adults from various careers, job interview simulation	Planning skills are one objective of this project, but without clear indication of how achieved other than simulation of job interviews	Use of group guidance; "Career Guidance Surveys" administered to students; explicit emphasis on self-awareness seems small
77 DROPOUT PREVENTION PROJECTS IN BALTIMORE, PADUCAH, AND LOUISVILLE	Disadvantaged high school students	Though this is primarily a counseling program, it involves some modification of curriculum and physical arrangements		Teachers involved in program through in-service training; no evidence of emphasis upon student educational awareness except implied effort to enhance motivation	Work-study arrangements to increase educational relevance		Attempts to enhance counseling effectiveness via home-school liaison and special resource centers; presumably self-awareness is increased by greater interpersonal contact

Chart 6a. Projects—Local Experiments

PROJECT	SCOPE	DEGREE OF PROGRAM INTEGRATION	MEDIA	CAREER-GUIDANCE OBJECTIVES			
				EDUCATIONAL AWARENESS	CAREER AWARENESS	PLANNING SKILLS	SELF-AWARENESS
78 EDUCATIONAL AND CAREER EXPLORATION SYSTEM (ECES) IBM	High school students; experimental in Flint, Michigan, with the possibility of becoming statewide	System is integrated with counseling system and student records, but seems relatively free-standing with respect to curriculum	An interactive computer system	Provides information about college-level programs; also assesses compatibility of certain job paths with student's secondary school achievements	Specific objective is to create career awareness of job requirements and characteristics	Is designed as a planning tool, but does not seem specifically aimed at developing planning skills	Student must define self-concept in terms of interests and aptitudes, which the computer compares with stored data for the student
79 FIELD TESTING OF A COMPREHENSIVE ACHIEVEMENT MONITORING SYSTEM Sequoia Union High School District, California	Secondary level; presently is a pilot test in 27 courses throughout the district's schools	Designed to be usable throughout the curriculum; mainly curricular until recently, but a guidance component is now being designed; test information can be made available to counselors	Computer used extensively to score student tests, evaluate behavioral objectives, and provide data on performance to students, teachers, counselors, and administrators	Shift locus of evaluation from national norms to criterion-reference (as determined by teacher)	None	Not used in student planning	Shifts student's perception of achievement from his performance relative to others to his performance relative to the total block of subject matter
80 MARYLAND CAREER DEVELOPMENT PROJECT	Baltimore city schools plus others in Maryland; K through adult	Career information appears integrated into school curriculum	Computerized information system for career development; statewide TV series	Suggested educational activities relating to career objectives are given in career-education notebook	Elementary level--simulation, gaming, field trips, and TV series; junior high--"lab" experiences for career exploration; high school--cooperative education and intensive job-entry skill training	Notebook for facilitating career development plus suggested activities to reach objectives	Not evident in program description
81 OPERATION GUIDANCE Center for Vocational and Technical Education, Ohio State	Field testing in selected comprehensive high schools will continue through 1977	Degree and method of integration optional for district	Available methods range from computer-based to pencil and paper	About 700 guidance methods (materials, programs, checklists, etc.) designed to meet a variety of behavioral objectives have been identified. Local districts will choose which objectives they wish to emphasize and then may select from the several hundred available methods			

PROJECT	SCOPE	DEGREE OF PROGRAM INTEGRATION	MEDIA	CAREER-GUIDANCE OBJECTIVES			
				EDUCATIONAL AWARENESS	CAREER AWARENESS	PLANNING SKILLS	SELF-AWARENESS
82 SAN DIEGO (CALIFORNIA) UNIFIED SCHOOL DISTRICT GUIDANCE PROGRAMS FOR ESEA-TITLE I TARGETED SCHOOLS	Junior high school students	Little; appears to be largely a free-standing guidance activity		Motivational function is assured, but program description is light on specific content or procedures			Emphasis on personal counseling techniques and increasing counseling effectiveness via paraprofessionals, bilingual counselors, etc.
83 A SYSTEMS APPROACH TO VOCATIONAL GUIDANCE Culver City Unified School District, California	Involves all high schools	Vocational curriculum is integrated with vocational guidance and placement	Use of computer to match student data with data on community career opportunities	Contributes to awareness of career-oriented programs and their compatibility with various aptitude levels	Career information as it relates to student aptitudes and curriculum requirements for jobs which will be available		System appears to foster self-awareness by assessing student characteristics in relation to job requirements
84 YOUTH GUIDANCE SYSTEMS College Entrance Examination Board	7 pilot schools within California	Plans involve integration into curriculum; testing is integrated with individual assessment and with program evaluation	Use of computer for test-processing	Educational decision-making included in program	Components of vocational information do not seem to be specific as yet		

Chart 6b. Projects—State Plans

STATE	SCOPE	DEGREE OF PROGRAM INTEGRATION	MEDIA	CAREER-GUIDANCE OBJECTIVES			
				EDUCATIONAL AWARENESS	CAREER AWARENESS	PLANNING SKILLS	SELF-AWARENESS
85 CALIFORNIA Model for Career Development	California public schools (planning document); K-adult	The rhetoric of integration (e.g., career guidance into curriculum, career education with academic education) is largely unsupported by clear ideas on accomplishment of that integration	None specified	Emphasis on understanding the interrelationships of career patterns and educational programs	Emphasis on understanding general characteristics of work (and its psychological implications) and specific job families	Some discussion of need for students to have coherent career plans, as well as partially articulated procedures	Emphasis at the conceptual level with some procedures (e.g., evaluation of student's test scores in relation to averages and those of other individuals)
86 MARYLAND Career Development Project	Statewide, K-adult	Conceptually highly integrated; many objectives are carried out within curriculum; testing program integrated with guidance; difficult to assess the actual extent of integration in pilot projects (Ann Arundel and Garrett counties)	Utilizes computer-based information system on career opportunities and educational programs; TV series for elementary students on careers	Objectives are stated for educational awareness in junior and senior high school, encouraging student to plan program of studies appropriate to his emerging career interests	Strongest component of Maryland plan; career awareness implemented through job models, field trips, student research projects, media, and work experience	Objectives specify student perceptions of self in relation to work and school and understanding of long-range effects of current decisions and self-evaluation	Objectives stress student self-awareness through assessment of values and achievements and through analysis of test and inventory data, use of films, group dynamics, etc.
87 NEW JERSEY Model for Career Development	Preschool through adult, pilot programs in Camden, New Brunswick, and Rahway	Conceptually the model has exceptional continuity; also provides activities to increase interrelatedness of student, school, home, and industry; extensive integration with curriculum in elementary years, limited primarily to vocational education in secondary years	Heavy use of videotape as well as a variety of other media, including photography	Student encouraged to relate career decisions to educational requirements beginning in junior high	Extensive use of work-study and other part-time employment experiences, career exploration clubs, and Introduction to Vocations Program	Developed through "hands on" experiences	Continuing emphasis on self-assessment through all school years, beginning with a Technology for Children Program for elementary schools
88 OHIO Vocational Education Guidance	Statewide, K-adult	Guidance activities seem integrated into curriculum, but career-awareness goals seem largely traditional "voc-ed"; not fully integrated into other curricular functions	None specified	Basis for plan is "relevance" of curriculum to job preparation; thus experiences are designed to help student pursue specific skills and see connection between various jobs and educational tasks	Sequence of "hands on" experiences emphasizing exploratory information (K-6), orientation (7-8), exploration through "practical arts" (9-10), occupational choice and placement (11-12)	No clear delineation of how planning skills are to be taught	

Chart 6b. Projects—State Plans

STATE	SCOPE	DEGREE OF PROGRAM INTEGRATION	MEDIA	CAREER-GUIDANCE OBJECTIVES			
				EDUCATIONAL AWARENESS	CAREER AWARENESS	PLANNING SKILLS	SELF-AWARENESS
89 WISCONSIN A K-12 Guide for Integrating Career Development into Local Curriculum	K-12; plan piloted in 10 schools in 1970-71	Teacher is central; career-guidance concepts are tied to specific course areas through behavioral objectives, learning activities, resources, outcomes, and suggestions for evaluation	Videotape programs on world of work on TV stations throughout state; also extensive use of films, filmstrips, tapes, slides, and transcriptions	Concepts stress need for student to see relation of career to curriculum; specifics of this are lacking	Again, concepts stress early information on careers; specific objectives developed in high school; little discussion of implementation	General stress on planning as a sequential process (K-adult) of collecting and utilizing information	Concepts involved in self-awareness are stated in terms of objectives--some quite vaguely; no process for achieving is given

PROJECT	SPONSORSHIP	PURPOSE	ACTIVITIES	TIMING	CAREER-GUIDANCE OBJECTIVES			
					EDUCATIONAL AWARENESS	CAREER AWARENESS	PLANNING SKILLS	SELF-AWARENESS
90 CAREER DEVELOPMENT, GUIDANCE, COUNSELING, AND PLACEMENT PROJECT University of Missouri Columbia	U.S.O.E., Bureau of Adult Vocational and Technical Education	To provide key state personnel with technical and management skills needed to conduct state workshops leading to implementation of career education and guidance	• Conducted national training conference for leaders from each state	January 11-13, 1972	Conference dealt with overall plan for developing a state-tailored guide for implementing career guidance, counseling, and placement programs in their respective states			
			• Gather information on career-development projects across the nation	Over duration of project, 7/71-12/72	Projects range from those that try to meet all 4 objectives to those focusing on a single objective			
			• Send pertinent materials to state leaders	Over duration of project	Materials are varied. Some are articles dealing with career development as a whole; others are programs dealing with some specific area, such as decision-making; etc.			
			• Provide consultative help to states	Over duration of project	Cuts across all objectives			
			• Participate in state workshops	Summer 1972	Workshops, hopefully, will lead to the actual development of state plans that include all 4 objectives			
			• Develop Career Conscious Individual Model	Under development; completion indefinite	Develop sense of interrelatedness of education, work, and leisure and the necessity of various educational content	Increase understanding of interrelatedness of life style, leisure, and occupations and the variety of factors that may affect job satisfaction and job success	Develop understanding of consequences of planning, interrelationship of all 4 objectives, and nature and scope of lifelong career planning	Help students develop conceptions of their interests, aptitudes, abilities, and values and relate these to similar conceptions they see in others
91 CENTER FOR OCCUPATIONAL EDUCATION North Carolina State University Raleigh	U.S.O.E., National Center for Educational Communication	To determine and gather information on the most advanced career-education projects in the country	• Sent self-study forms to about 150 projects; over 100 returned	Report of self-studies scheduled for release in April 1972	There appear to be a wide variety of approaches to career guidance, particularly at the junior high school level. Specific information as yet is unavailable			
			• Evaluation of the 100 projects by outside teams led to selection of 41 for site visits	Findings to be published in June 1972				
			• Developed criteria and standards by which to assess projects	Fall 1971				
			• Site visitors will hold conference to determine components and services of an ideal career-education program	Summer 1972				

PROJECT	SPONSORSHIP	PURPOSE	ACTIVITIES	TIMING	CAREER-GUIDANCE OBJECTIVES			
					EDUCATIONAL AWARENESS	CAREER AWARENESS	PLANNING SKILLS	SELF-AWARENESS
92 CENTER FOR VOCATIONAL AND TECHNICAL EDUCATION Ohio State University Columbus	U.S.O.E, Bureau of Adult Vocational and Technical Education; this is only one of numerous projects being conducted at the Center [see also 82]	To coordinate development of a school-based comprehensive career-education model at 6 sites around the country	• Development of hundreds of behavioral objectives that served as framework for curriculum unit development	July 1971 to June 1972	Curriculum units are intended to include activities and processes to meet each of these objectives at every level of education, K through 12. As yet, it is undetermined what specific form the guidance component will take			
			• In-service training for selected teachers at the 6 sites	Summer 1972				
			• Development of roles and functions of guidance personnel	Spring 1972 to Spring 1973				
			• Initial implementation of curriculum units and guidance functions into site schools	September 1972 to June 1973				
93 EMPLOYER, HOME, AND COMMUNITY-BASED CAREER EDUCATION MODELS	U.S.O.E, Bureau of Adult Vocational and Technical Education; several organizations are participating	To develop non-school-based career-education models	• Employer-based model focusing on teenagers	Probably on a similar time schedule as the school-based model [see 92]	Unknown at this time. Presumably, these efforts will emphasize career opportunity			
94 NATIONAL CAREER INFORMATION CENTER American Personnel and Guidance Association	U.S.O.E.	To provide information about counseling resources, tools, and techniques to keep practitioner abreast of changes in occupational and educational world; to begin in August 1972	• Publish INFORM, a newsletter designed to identify relevant but not-so-well-known materials and dissemination techniques	Monthly	Information contained in the newsletter will include materials that seek to meet one or more of these objectives. Probably the majority of materials listed will be focused on career information and exploration			
			• Publish informational bibliography about career opportunities put together around a job-cluster concept	Monthly		Each issue will provide a listing of resources related to a particular job family		
			• Respond to requests for a variety of specific guidance information	Ongoing		Most requests probably will be for information about a specific occupation, but it is too early to be sure		

PROJECT	SPONSORSHIP	PURPOSE	ACTIVITIES	TIMING	CAREER-GUIDANCE OBJECTIVES			
					EDUCATIONAL AWARENESS	CAREER AWARENESS	PLANNING SKILLS	SELF-AWARENESS
95 NATIONAL CONFERENCES ON CAREER EDUCATION Maryland State Board of Education	U.S.O.E.	To acquaint state decision-makers with desirability, feasibility, and nature of career education	• A series of sixteen 2-day regional conferences to which 25 leading decision-makers from each state are invited	During March, April, and May 1972	Stress relationship of occupational choices to educational requirements and necessity for making sure that alternatives are presented as different in kind, not quality	Stress the need to begin focusing on career awareness and values of work-oriented society in elementary school	Stress life-long nature of career development, need to consider career choices early and at same time not treat them as irreversible, and importance of simulated and real occupational experiences	Stress need for self-assessment systems that include both paper and pencil instruments and actual "hands on" experiences to increase awareness of skills, aptitudes, interests, and values
96 NATIONAL CENTER FOR CAREER INFORMATION SERVICES Bloomington, Indiana	Probably operating with a U.S.O.E. grant	To coordinate the development of VIEW-like [47] microfilmed career-information systems in states around the nation	• Acts as clearinghouse for information for those interested in establishing VIEW-like operations • Coordinate systems to improve quality of existing operations and save unnecessary duplication of efforts	Ongoing, began in July 1971		VIEW systems deal primarily with localized career information		
97 NORTHWEST REGIONAL EDUCATIONAL LABORATORY Portland, Oregon	U.S.O.E. Career Education Development Task Force	To report and annotate emerging definitions of career education, to analyze several career-education programs and models, and to investigate counseling and guidance practices in selected major cities	• Identify concepts and issues from literature searches and personal contacts • Describe what people are doing about career education • Visit 8 major cities across the country to analyze their guidance operations • Distribute pertinent materials and information from above activities to interested parties	Project funding goes from November 1971 to November 1972	This investigative effort is concerned with the general thinking and doing connected with career education and career guidance, and a likely outcome will be the discovery of which objectives are receiving most of the attention and effort. This should be particularly true of the study of the guidance programs of major cities			

PROGRAM	SCOPE	DEGREE OF PROGRAM INTEGRATION	MEDIA	CAREER-GUIDANCE OBJECTIVES			
				EDUCATIONAL AWARENESS	CAREER AWARENESS	PLANNING SKILLS	SELF-AWARENESS
98 BROWARD COUNTY (FLORIDA) VOCATIONAL GUIDANCE PROGRAM	Focus on senior high school students	Program has its own curriculum; not evident whether done as a guidance activity or within existing course; appears to be an exclusively guidance activity, however	Computer [including VIEW, 47], videotapes and audiotapes, film	Seems aimed at educational awareness for vocationally or non-college-oriented student	Films, audio-video tapes, and Project VIEW carry specific job information; computer-assisted, job-student matching program; and Vocational Investigation and Planning (a sequential set of classroom experiences to heighten career awareness)	The Vocational Investigation and Planning Program has goal of developing decision-making skills via group interaction, role-playing, etc.	Not specified
99 CALIFORNIA WORK EXPERIENCE EDUCATION PROGRAM (WEEP)	307 California school districts, grades 11-12	A curricular program (with credit granted); serves a guidance function (especially exploratory work experience)		WEEP is supposed to assist student in seeing link between job and schooling	Goal of WEEP is specifically to provide experiential career information	Not a stated function of WEEP	No specific means for student self-awareness
100 DuPAGE COUNTY, (ILLINOIS) COMPUTERIZED VOCATIONAL INFORMATION SYSTEM (CVIS)	5 schools at junior high, senior high, and junior college levels in the county	It is completely integrated with other parts of guidance system, and can handle routine administrative tasks (attendance reporting, scheduling, and registration)	Interactive computer system plus filmstrip tape unit at junior high level	System contains information on appropriate programs for a range of careers at secondary and postsecondary levels; students are informed of programs relevant to their career interests and academic history	System produces information for students on careers utilizing Roe's career classifications and Holland's personality types, and based upon student's stated interests and academic history	Practice in decision-making is afforded through student's articulation of values and interests and computer's ability to assess their congruence with various career possibilities	Achieved through student's interaction with computer in terms of test, inventory, and attitude data; at junior high level Holland's classification is used to help student assess self
101 GARY AREA (INDIANA) TECHNICAL-VOCATIONAL CAREER CENTER CAREER DEVELOPMENT PROGRAM	Occupational orientation program operational in middle school with plans for implementation K-12	There is a major emphasis on integration of career development into curriculum; program includes summer project		No evidence of emphasis on educational awareness	Goals of program in this area seem most fully operational via group guidance, speakers and field trips, audiovisual and printed materials	No special techniques stated for development of planning skills	Specified as a goal, but present implementation unclear; plans call for self-assessment via counseling, testing, and inventories
102 GUNN HIGH SCHOOL LIFE STYLE CENTER Palo Alto, California	Senior high students, particularly seniors, in one of 3 high schools in Palo Alto	Drop-in guidance center	Taped interviews with business/professional people describing their occupations and life styles	From interaction with business and professional people while on field trips to their establishments	Occupational information arranged according to life styles; local job information available; parent-led field trips		Self-assessment materials on hand

PROGRAM	SCOPE	DEGREE OF PROGRAM INTEGRATION	MEDIA	CAREER-GUIDANCE OBJECTIVES			
				EDUCATIONAL AWARENESS	CAREER AWARENESS	PLANNING SKILLS	SELF-AWARENESS
103 HUGHSON (CALIFORNIA) HIGH SCHOOL LEARNING ACTIVITY PACKAGES	Total high school population	Total program integration, including structural changes in the school	Visual aids, etc.	Emphasis is on learning "packages" which are directed toward behavioral objectives; self-assessment and exemption allow student to move at his own pace	Guidance LAPs appear to emphasize career guidance, but the extent to which this emphasis is generalized to the total program is not evident	Decision-making, with respect to student selection of program, is a part of this activity	Guidance activities stressing awareness of abilities and interests, and development of social skills
104 KIMBERLY (IDAHO) SCHOOLS COMPREHENSIVE GUIDANCE PROGRAM	K-12, Kimberly School System	Program is designed to introduce units on careers into curriculum in various areas and to broaden guidance involvement to include teachers, parents, and community groups	Some audio-visual	Goals include relating educational planning to career planning; emphasis on educational requirements; special information available in guidance center	Curricular units on various careers (e.g., "Exploring the World of Work" in 6th grade and "Careers in Conservation" in 8th). Each student develops an occupational folder; guidance materials emphasize occupational information	Planning skills not formally taught; many program activities can be seen as planning tools	Via battery of tests and inventories which are voluntary; mostly self-administered, self-interpreted, and summarized by student in narrative profile, linking personal characteristics to specific careers
105 MESA (ARIZONA) SCHOOLS	All school counselors	Program is an effort to redefine tasks of counselors within the context of an "accountability" model; district makes extensive use of paraprofessionals		At present this is a planning activity, designed to redefine tasks of counselor in view of probable impact of career-education model [Mesa is one of 6 test sites--see 92] and new guidance roles it may include; extensive surveying of students, parents, educators, and community has been done and is now being analyzed to develop goals, objectives, and evaluation procedures. American Institutes for Research is consulting			
106 A PROGRAM FOR LEARNING IN ACCORDANCE WITH NEEDS (PLAN)	K-12; developed by American Institutes for Research; presently marketed nationally by Westinghouse Learning Corporation	Highly developed integration of guidance and instruction, career and academic education, and testing and other student assessment	Computers support the entire system--storing and retrieving student data, scoring tests, and assigning student's lessons; based on student-teacher designed PLAN and student's academic history	PLAN necessitates high degree of educational awareness since student participates extensively in decisions about his program of studies	Career information given K-12 via modules forming "applied economics strand"; progresses from simple notions about jobs to more complex and specific job information; supplemented by data on probability of job success for various occupations	Heart of PLAN decision-making process is student goal formulation in which student compares ability assessment with job characteristics through job "profiles"	Via continuous critereon-referenced testing of student at each "teacher/learning" unit

PROGRAM	SCOPE	DEGREE OF PROGRAM INTEGRATION	MEDIA	CAREER-GUIDANCE OBJECTIVES			
				EDUCATIONAL AWARENESS	CAREER AWARENESS	PLANNING SKILLS	SELF-AWARENESS
107 ROSLYN HIGH SCHOOL CAREER GUIDANCE SERVICES (NEW YORK)	High school students	Exclusively a guidance function	Some tapes and filmstrips	Appears to treat career guidance as separate from college guidance	Through general career conferences, a specialized career counselor, field visits, occupational library (including tapes and filmstrips), group career planning sessions, self-study guides, and placement aid	Little specific emphasis on planning skills	No apparent emphasis on this; program is mostly designed to give information on jobs and placement assistance; library does include "self-study" guides on self-appraisal and career planning
108 SAN DIEGO COUNTY (CALIFORNIA) SCHOOLS CAREER GUIDANCE CENTERS	36 centers in secondary schools in San Diego County	Exclusively a guidance activity	Publications, SRA visual aid kit, tapes, VIEW [47]	Focus is to provide career information; unclear how closely this is related to schooling	Via materials [publications, SRA kit, VIEW] and personnel (career counselors, paraprofessionals)	No formal activity specified, though program is clearly designed to aid career-planning activities	
109 SONOMA COUNTY (CALIFORNIA) CAREER INFORMATION CENTER	Anyone in the county	Essentially a separate guidance activity available to those in school or out	Telephone and written material; inquirer often put in phone contact with worker in his field of interest	Primarily handled by putting inquirer in touch with worker	Provides specific information over the phone on more than 400 jobs		
110 UNIVERSITY HIGH SCHOOL (MINNEAPOLIS) CAREER GUIDANCE PROGRAM	Grades 9-11 of an eventual 7-12 sequence	Activities attempt to integrate vocational guidance into curriculum principally via career unit in social studies	Includes some use of videotape and computer	Not specified	Via 4-week social studies unit on careers employing Life Career Game [69], videotapes of student panels, field trips, simulated counseling interviews, and computer-assisted counseling projects	Not specified, but activities appear to encourage students to conscious planning about careers	

Annotated Bibliography

Advisory Council on Vocational Education, *Vocational Education: The Bridge between Man and His Work.* Report of the Advisory Council on Vocational Education. Washington, D. C.: U.S. Government Printing Office, 1968, 220 pp. $2.25

The Advisory Council on Vocational Education was established by Congress in 1966 to evaluate the nation's program of vocational education and appraise the results of the Vocational Education Act of 1963. Advisory Councils are to convene every two years, and the first Council published this report based on an appraisal of two years' experience under the Act. The report begins with a review of vocational education since 1964, discussing in some detail such topics as growth and development, finance, administration, research, teacher education, and vocational guidance. Part II gives an evaluation and assessment of the existing situation in vocational education, listing both the achievements and the limitations of the programs. Part III presents the 26 specific recommendations of the Council.

Armor, David J., *The American School Counselor: A Case Study in the Sociology of Professions.* New York: Russell Sage Foundation, 1969, 227 pp. $8.95

This important study examines the characteristics and roles of school counselors within the framework of criteria used by sociologists to designate a profession. The author uses data obtained in an intensive study of counselors in 87 schools in the Greater Boston area, as well as nationwide data from the Office of Education Study of Equality of Educational Opportunity, and Project TALENT.

Of particular interest are the perceptions of the counseling role reported by counselors and students. For example, the Boston sample showed that counselors spent 60 percent of their time in school and college counseling, as contrasted with 11 percent in vocational counseling. Students did not view counselors as a major source of information, however. Two-thirds to three-fourths of the students named their family as the most important source of information on their plans for the future; only a small percentage regarded counselors as being most influential.

Figures on the amount of counselor-student contact derived from the Office of Education sample showed that nationwide 14 percent of high school seniors had never seen a counselor, 17 percent had had only one contact, and 41 percent had seen a counselor two or three times during their senior year.

Armor discusses some of the problems affecting the status of counseling as a profession: the institutional setting, the lack of professional autonomy, and control by persons who are not in the same profession. He also deals with the need for further research on evaluating the effects of counseling.

Bachman, Jerald G., *Youth in Transition. Vol. II. The Impact of Family Background and Intelligence on Tenth-Grade Boys.* Ann Arbor, Mich.: Institute for Social Research, University of Michigan, 1970, 289 pp. $5

The data reported in this monograph derive from an important longitudinal study of 2,200 tenth-grade boys. Begun in 1965, the study focuses on the effects of school environment on adolescents, and particular emphasis is devoted to the factors underlying school dropout. This volume deals with family background factors and abilities as they relate to social behavior and planning for the future.

Of particular interest to the career guidance-psychometric area is Bachman's report on his development of a true-false, multiple-choice test to measure the level of job information. However, results did not seem to measure anything independent of general intelligence.

Bailey, Larry J., ed., *Facilitating Career Development: An Annotated Bibliography.* Springfield, Ill.: Illinois Board of Vocational Education and Rehabilitation, Division of Vocational and Technical Education, 1970, 132 pp.

The detailed annotations in this bibliography were compiled from an exhaustive search of the career-development literature listed in *Research in Education* (1964-1970) and *Education Index* (1966-1970). The breadth of coverage--computer-based guidance systems, gaming and simulation, theoretical models and techniques for vocational guidance, curricular programs, and so forth--makes this a very useful reference. The official Vocational Education Board sponsorship of this project is a good example of the new and broader focus of vocational educators.

Barry, Ruth, and Wolf, Beverly, *Epitaph for Vocational Guidance: Myths, Actualities, Implications.* New York: Teachers College, Columbia University, 1962, 241 pp.

This well-known critique of the stereotypes and myths of vocational guidance, though written in 1962, is still widely applicable today. The authors discuss in detail the prevailing assumptions concerning theory, psychometrics, and occupational information. The lack-of-theory charge made in 1951 (Ginzberg, et al.) antagonized the vocational guidance leadership by the blunt assertion: "Vocational counselors are not theoreticians working on the problem of how individuals make their occupational choices, for, though they have no bias against theory, they have little time to invest in developing one." It was also echoed in 1968 by British vocational-guidance counselors Hopson and Hayes (1968), who wrote that, "When we look for objective investigations into the phenomenon of occupational choice, we discover that, until recently, the cupboards were distressingly bare."

Some of the specific criticisms are: (1) the tendency to use a student's test score as a discrete number, (2) the lack of applicability of interest inventories for high school age groups ("If one accepts findings about interest stability, then the use of the Kuder in junior and senior high school is at best a waste of money and time, and at worst dangerous in narrowing interests before the youngster has had a chance to develop them."), (3) the lack of relevance of the complicated occupational classification systems, particularly the *Dictionary of Occupational Titles* (32), and (4) the weaknesses of occupational brochures, which are "informational myths" and "deadly dull" from the student point of view.

Barry and Wolf are better at diagnosing the weaknesses of vocational guidance than at recommending improvements; the later chapters suggesting changes in counselor education are vague and general.

Boocock, Sarane S., "The Life Career Game." *Personnel and Guidance Journal*, 1967, Vol. 46, pp. 328-334

This paper reports results of field testing of a simulated game in which adolescent players make critical career decisions for a fictitious student and receive feedback on the consequences. The purpose of the game is to increase student understanding of the interrelations between decisions regarding occupation, education, and family life, and the factors affecting success and satisfaction in these areas. The author conducted field testing of the game using control groups of nonparticipating students and collected questionnaire and interview data from both groups. Evaluation of the results indicated intense interest and involvement among players. The game influenced attitudes toward individual vocational possibilities. Girls who played the game became more aware of career opportunities outside the home than nonplayers. The game also provided factual information about educational and vocational opportunities and guided students to sources containing such information. The author suggests the inclusion of the game in guidance programs and curricular areas such as social studies and home economics. She concludes the game might best be used as a basis for a "work unit" involving vocational testing, supplementary reading of films, and more detailed role playing. (See also 69.)

Borow, Henry, ed. *Man in a World at Work*. Boston: Houghton Mifflin, 1964, 606 pp.

Published in commemoration of the fiftieth anniversary of the National Vocational Guidance Association, this anthology is still the outstanding presentation of historical trends, current practices, and the many psychological and socioeconomic facets of vocational guidance.

Borow is represented by two articles, one an outline of the history of vocational guidance, and the other a critique of research, which he feels suffers from "premature and pretentious attempts at broad-scope theory building." His major focus is the idea of "investment of self in work," and he emphasizes the need for research in sifting out the motivational core of occupational experience.

Wrenn's chapter deals with the changing concepts of work and leisure brought about by industrialization, urbanization, and automation. He sees a growing responsibility for counselors to help students not merely with occupational goals, but with life goals that encompass the whole stretch of employed and leisure hours.

Holland's chapter in Part III, dealing with research horizons, summarizes the theoretical contributions of Super, Tiedeman, Roe, Flanagan, and his own work. Chapters by Samler, Shartle, Goldman, and Wilensky are annotated separately.

Borow, Henry, "Conjunction of Career Development and Curriculum: Problems and Potentials," in National Vocational Guidance Association, *Conference on Implementing Career Development Theory and Research through the Curriculum*. Washington, D. C.: National Vocational Guidance Association, 1966, pp. 17-32

Borow's presentation deals with a concern not often covered in the literature of career guidance—the tendency of children to develop negative attitudes toward some careers ("subjective occupational foreclosure"). This phenomenon Borow regards as fostered by the increasing isolation of young people from the world of work and the enormous complexity of modern industrial society. He briefly reviews the research corroborating the development of these hostile attitudes. Noting that "the school typically makes few systematic and effective efforts to combat the negative stereotype," he concludes that curricular materials should provide more realistic portrayals of the world of work.

Borow, Henry, "Career Development: A Future for Counseling," in William H. Van Hoose and John J. Pietrofesa, eds., *Counseling and Guidance in the Twentieth Century: Reflections and Reformulations*. Boston: Houghton Mifflin, 1970, pp. 33-46

This succinct and thoughtful analysis of counseling yesterday, today, and tomorrow is an outstanding contribution to the literature of career guidance. Borow sketches the major conceptual models of guidance, and pinpoints major deterrents to improvements in its practice. These deterrents are: (1) the process of professionalization, which tends to build in resistance to suggestions for change from the outside, (2) the insulation of the counselor from other personnel and functions of the school, most important the classroom teacher and the curriculum, (3) the reluctance of the counselor to deal forthrightly with helping students develop mature atti-

tudes and values, (4) lack of success with disadvantaged students, and (5) overloading counselors with semiadministrative chores.

Borow's view of the future is that the curriculum is the key to change in fostering educational and career development. His concept of the optimal contribution of the counselor is less as "institutional conformist" and more as "benign interventionist."

Brim, Orville G. Jr.; Glass, David C.; Neulinger, John; and Firestone, Ira J., *American Beliefs and Attitudes about Intelligence.* New York: Russell Sage Foundation, 1969, 291 pp. $7.75

The results of this research reveal a pattern of general ignorance and misinformation about intelligence and its measurement. Ten thousand high school students were questioned in 1968 on the following topics: their own experience with tests, beliefs about accuracy and importance of testing, self-estimates of intelligence, interest in receiving test scores, and their feelings about ability-grouping and the use of test scores in decision-making. School policies of keeping scores confidential are blamed for the ignorance and inequities in knowledge about the individual's own intelligence. Although the rationale for this practice is that it prevents possible damage to the student's self-esteem, the authors consider it "shocking and astonishing to find so little solid social research about the consequences of feedback of information about abilities." They recommend development of uniform procedures for score-reporting, but caution that school personnel charged with this responsibility should be better educated about the pitfalls of test interpretation as well as their own possible biases.

A national educational program is recommended to achieve better understanding of the predictive importance of test scores and flexibility in use of ability classifications. Students from families with low educational backgrounds tend to regard test scores as infallible, and need help in developing a more realistic perspective. They feel that children from culturally deprived families should be given sufficient exposure to test-taking starting in early school years so that they are not handicapped by procedural unfamiliarity. The authors' general view is that testing can be an opportunity to rectify mistakes in class or career allocation, but too rigid interpretations can create more dead-end mistakes.

Burkett, Lowell A., "Task Force Report on Career Education." *American Vocational Journal,* 1972, Vol. 47, No. 1, pp. 12-14

This is the first publication of an important document—the resolutions adopted by the American Vocational Association House of Delegates at the 1971 annual convention spelling out the AVA role in implementing the concept of career education.

The resolutions call for convening a White House Conference on Career Education, as well as state and national forums involving educational, business, industrial, and labor leadership. On the legislative front, AVA is to initiate a major effort to implement the program along the following lines: school programs to develop awareness of the world of work, career orientation, exploratory experience, assistance in decision-making, specialized training for occupations or occupational clusters—all jointly sponsored by the schools, business, and industry. Other concerns are listed as follows: programs for homemaking careers, work-study and experience programs, vocational guidance, placement, and curricular development. The last three recommendations are support for professional personnel development programs, research to develop exemplary programs and new models, and advisory councils on Education for Careers at national, state, and local levels.

Burkett urges that AVA should take the leadership role in making "career education" more than a semantic innovation; he warns that without the involvement and support of all sectors of society, "We can expect career education to falter as have many progressive ideas in education before it."

Campbell, Robert E., et al., *Vocational Guidance in Secondary Education: Results of a National Survey.* Columbus, Ohio: Ohio State University Center for Vocational and Technical Education, 1968. (Available from ERIC—ED 026 534)

Recommendations of this 1966 nationwide survey center around the need for a systems analysis approach to the design of guidance programs. The survey queried more than 6,000 principals, counselors, teachers, students, and parents in six types of public secondary schools in order to obtain bench-mark data on the current status of vocational guidance and to identify changes needed both in program design and counselor education.

The findings emphasize the root problem of overexpectations of what counselors can accomplish, creating a situation in which "a counselor must spread his time too thinly across his various responsibilities to succeed at any of them." The suggested remedy is that "guidance systems must be designed systematically and realistically to achieve a set of clearly stated objectives (in terms of measurable student behaviors), selected from a much larger set of possible objectives." An extensive outline discusses the implementation of the systems approach.

Campbell, Robert E.; Suzuki, Warren N.; and Gabria, Michael J. Jr., "A Procedural Model for Upgrading Career Guidance Programs." *American Vocational Journal,* 1972, Vol. 47, No. 1, pp. 101-103

This important article outlines the model characteristics of an effective school career-guidance program under development at the Center for Vocational and Technical

Education at Ohio State University (81). The model aims at correcting shortcomings of school career-guidance programs found in a national survey conducted in 1968 by Campbell et al. These were: (1) the tendency to undertake too ambitious a program, and (2) failure to make use of innovative methods and technology.

The essential model characteristics listed in this article are: (1) student-centered—objectives should be stated in behavioral terms specifying desired student outcomes; (2) optimal use of resources; (3) extended resource base—involving teachers, administrators, and community resources; (4) alternative career-guidance methods and techniques; (5) a customized program—each school can develop a program most relevant to the needs of its own students.

College Entrance Examination Board, *Report of the Commission on Tests, Vol. I. Righting the Balance, Vol. II. Briefs.* New York: College Entrance Examination Board, 1970b. Vol. I, 118 pp. $2. Vol. II, 194 pp. $3

The Commission on Tests was appointed by the College Board and charged with reviewing the Board's testing functions in American education and recommending possibilities for fundamental changes in tests and their use. The Commission recommended that the Board should modify and improve its testing programs in order to serve three functions: (1) a distributive function by contributing to comprehensive and sensitive descriptions of students and colleges, (2) a credentialing function by certifying demonstrable educational attainment whether or not acquired by attendance in school or college, and (3) an educative function by instructing students both in subject-matter areas and in skills and methods of making decisions.

The Commission placed considerable stress on the principle of symmetry in college choice. That is, students as well as colleges should be provided with useful information relevant to the selections they make. The Commission advanced various suggestions regarding new directions for College Board tests. These dealt with different approaches to the assessment of abilities of minority students, a broadened view of the college admissions process of the future, and the role of modern technology in providing better services to students and colleges.

Marland's article, "A Proposal for a Comprehensive System of Testing for Job Entry," speaks to the potentials of adapting College Board college-testing strengths to a corresponding framework for matching students with jobs. He proposes that the Board sponsor a major study of the possibility of having all students participate in a single general measurement at the end of high school that would combine elements relating to college or job goals.

Components of such a study are outlined by Marland. They include: (1) measures of academic achievement relative to the job needs of the occupation for which the student is being assessed; (2) appraisal of personal characteristics, attitudes, and motivations important to job performance; (3) a performance test that could certify competence at a particular job-entry level, administered by a panel of practitioners.

College Entrance Examination Board, *A Chance to Go to College: A Directory of 800 Colleges That Have Special Help for Students from Minorities and Low-Income Families.* New York: College Entrance Examination Board, 1971, 248 pp.

This college directory is designed to break down the "information barrier" that has often been a deterrent to higher education for minority-poverty students. It provides general discussions of the decision to go to college, admissions and financial aid procedures and deadlines, as well as a compilation of information on 829 colleges offering special programs and opportunities for disadvantaged students. Although this publication is out of print, most of the information contained in it has been updated and is included in the 1972 edition of *The College Handbook* (10).

Cooley, William W., "A Computer-Measurement System for Guidance," in Edward Landy and Arthur M. Kroll, eds., *Guidance in American Education II: Current Issues and Suggested Action.* Cambridge, Mass: Harvard Graduate School of Education, 1965, pp. 265-279

The case for computers in guidance is argued in Cooley's paper presented at the second Harvard summer institute. He takes issue with the prevailing emphasis on individual counseling as "the only legitimate activity of guidance programs," and draws a broad-scale picture of the potential contributions that computers can make. They should be used to serve a diagnostic function, spotting discrepancies and unrealistic student plans by the use of multivariate analysis. Computers can also provide programmed experiences that lead a student through the types of situations that build a realistic concept of what, for example, a mechanical engineer does, what aptitudes and training he needs, and so forth. Cooley also discusses the need for "dynamic norms"—as typified by Project TALENT longitudinal data, which make it possible to relate subsequent educational or vocational implications to current student behavior and decisions.

To cut the costs of computerized facilities, he suggests the possibility of regional data-processing centers, where a central facility can serve many school systems.

Cooley, William W., and Hummel, Raymond C., "Systems Approaches in Guidance." *Review of Education Research,* 1969, Vol. 39, No. 2, pp. 251-262

This article presents an overview of the systems approach, a review of three types of systems in guidance, a brief summary of a few other efforts in this area, and projections for the future. A systems approach attempts to an-

alyze the interrelationships of all parts to each other and to the whole itself, and it includes the following steps: translate aims into objectives, design procedures to accomplish objectives, and implement the model and evaluate the results in terms of the objectives. Most of the projects discussed are computer-based, and the implication is clear that the computer is practically sine qua non to a systems approach to guidance. The authors' final word of caution is that we must not expect too much too quickly. Systems developers have a tendency to underestimate both the time and money needed for complete development of systems approaches to guidance.

Crites, John O., *Vocational Psychology.* New York: McGraw-Hill, 1969, 704 pp. $13.50

In 1956 Anne Roe wrote a similar book on the psychology of vocations—as she said, because no one had written such a book. This volume by Crites, written slightly more than a decade later, amply illustrates the considerable amount of research in this area during the intervening period. It is an ambitious and comprehensive volume that includes a description and history of vocational psychology, theory and research on vocational choice, and a major section on the dynamics of vocational adjustment. It is a well-organized and carefully researched book including well over 1,000 references.

Crites, John O., *The Maturity of Vocational Attitudes in Adolescence.* Washington, D. C.: American Personnel and Guidance Association, 1971, 110 pp. $2.50

This monograph is essentially a research report of the work of the Vocational Development Project which Crites began at the University of Iowa in 1961. It reports his work of constructing, testing, and revising the Vocational Development Inventory (see 62), and it includes the various forms of the VDI along with norms for several kinds of groups that have taken it.

The main purpose of the monograph is to summarize all of the research which has been classified as survey, technique, theoretical, and applied that has been conducted on vocational development by the project staff and others since 1965.

This report is an introduction to the VDI, but more important it lays additional foundations for the concept of vocational guidance as a life-long, developmental process.

Dillenbeck, Douglas D., *Guidance Services 1968-1973.* A Report to the Trustees of the College Entrance Examination Board. New York: College Entrance Examination Board, 1969, 24 pp.

This report proposes a comprehensive program of guidance services designed to enable individuals to make more fully informed decisions regarding postsecondary education. Although it has general applicability for all involved in guidance and counseling, it has specific programmatic implications for the College Board. The report proposes: (1) developing a more comprehensive information system on all higher education institutions, (2) providing instruments to assist individuals in developing realistic self-concepts with respect to education, (3) helping individuals learn rational processes of educational decision-making, and (4) providing guidance materials intended for an individual's independent use. Based upon these proposals, the author recommends components of College Board programs aimed at both high school and junior high school populations. Several of the proposals have resulted in new programs including Deciding (68) and the College Locater Service (26).

Dyer, Henry S., "A Critique of Testing," in Edward Landy and Arthur M. Kroll, eds., *Guidance in American Education III: Needs and Influencing Forces.* Cambridge, Mass.: Harvard Graduate School of Education, 1966, pp. 97-116

This analysis of the rationale underlying school testing was presented at the 1965 Harvard Summer Institute for Pupil Personnel Administrators. Dyer finds the main hindrance to optimal use of tests to be the "lack of technical sophistication" of school administrators in score interpretation. He asserts that proper interpretation should build a "hypothesis-generating-hypothesis-testing syndrome," which is "the essence of rational decision-making." Dyer is concerned that studies of guidance practices indicate that students are not receiving the kind of interpretive feedback that contributes to this kind of decision-making.

Feldman, Marvin J., "Comprehensive Education: Redefined for a Humanist Society," in Gerald G. Somers and J. Kenneth Little, eds., *Vocational Education: Today and Tomorrow.* Madison, Wis.: Center for Studies in Vocational and Technical Education, University of Wisconsin, 1971, pp. 327-347

This article calls for a sweeping reorganization of the secondary school curriculum to replace an educational structure that Feldman characterizes as "out of date, out of touch, and out of balance." His thesis is that vocational education should be integrated into the continuum of education, beginning early in the middle school years. He argues that vocational and general education should reinforce each other with the goal of having students acquire transferable work skills. Feldman also recommends an annual "career-objective analysis" for each student that would relate school performance to career possibilities, as scholastic aptitude testing enables the college-bound student to relate his abilities to educational opportunities.

Flanagan, John C., "The Implications of Project TALENT and Related Research for Guidance." *Measurement and Evaluation in Guidance,* 1969, Vol. 2, No. 2, pp. 116-123

The author reviews briefly some implications of Project TALENT that have led to Project PLAN (106), a computer-

supported individualized education program. The central function of the program is guidance and individual planning of curriculum units. It provides information regarding status of individual development in intellectual, occupational, and social areas and stresses the developmental nature of aptitude and intelligence. The program is also designed to inform the student of occupational possibilities and to direct him in assuming responsibility for setting and achieving goals through management of his educational and personal development. The author describes methods used in the program and discusses further contributions to curriculum, instruction, measurement and evaluation, and teacher development.

Flanagan, John C.; Dailey, John T.; Shaycoft, Marion F.; Orr, David B.; and Goldberg, Isadore, *Studies of the American High School.* Palo Alto, Calif.: Project TALENT Office, American Institutes for Research, 1962. $8.50. (Mimeographed)

This monograph contains a comprehensive report of the first results of the Project TALENT findings concerning the characteristics of American high schools. The sample of 1,353 American secondary schools was classified into 17 categories to relate specific school characteristics to measured outcomes. Some tentative conclusions are drawn as follows: levels of achievement vary markedly; the average achievement for students in specific schools ranges from the 5th to the 95th percentile for individuals; the top three-fourths of the graduates in some schools are better prepared than the top tenth in some other schools —thus class rank is of limited value as a screen for college entrance unless the college draws from a very homogeneous group of high schools. The authors conclude that, "There is no single factor accounting for excellence of results in schools, and the credit for effective learning has to be distributed among a very large number of different types of effective practices and treatments." The four factors that seem to be most important are teacher salaries, teacher experience, number of books in the school library, and per-pupil expenditure. The data also indicate some factors which seem unlikely to be prime causes of school excellence. Among these are school size, average class size, age of building, and suburban location. The authors also regard the 17-group taxonomy taken in conjunction with noncurriculum-linked tests, such as the Abstract Reasoning Test, as a useful yardstick for comparing selected school outcomes on both an absolute and a relative basis.

Flanagan, John C., et al., *The American High School Student.* Palo Alto, Calif.: Project TALENT Office, American Institutes for Research, 1964, 738 pp. $10

Project TALENT is an extensive study of American youth including follow-up into adult life. A comprehensive battery of tests and instruments was developed to measure aptitudes, abilities, knowledge, interests, activities, and backgrounds of high school students. In 1960 this two-day battery was administered to a stratified random sample of about 440,000 students constituting about 5 percent of the American high school population. More than 2,000 items of information were collected about each student. The project represents the first comprehensive survey of its kind. Follow-up studies have provided particularly valuable data.

Gelatt, H. B., "Decision-Making: A Conceptual Frame of Reference for Counseling." *Journal of Counseling Psychology,* 1962, Vol. 9, pp. 240-245

In searching for a unitary, direction-providing framework for guidance counseling, Gelatt singles out "sequential decision-making." This frame of reference requires definition of objectives, collection and analysis of data, study of alternatives, and evaluation of results—in other words, a scientific approach. Rather than being restrictive or giving guidance a position of excess control, this framework would increase the student's "freedom of choice" because he would not have to make decisions on the basis of only haphazardly perceived alternatives evaluated with subjective bias.

Implications of adopting this framework include: (1) the necessity for collection and utilization of reliable empirical data, (2) the chance to develop the student's capacity for future decision-making, (3) the availability of a valuable tool in attacking the ever-present unrealistic expectations of both students and parents, (4) an early opportunity for the student to test his self-concept and so have the benefit of that test in making future educational and career decisions, (5) the specification of expected professional behavior on the part of counselors, and (6) the availability of a basis from which the theory and the practice of guidance can be evaluated.

Ginzberg, Eli, "Career Guidance: Is It Worth Saving?" *Impact,* 1971a, Vol. 1, No. 1, pp. 4-15. Reactions to Ginzberg, pp. 16-22

The importance that the counseling profession is assigning to career guidance is evidenced in the space devoted in this first issue of the new ERIC Counseling and Personnel Services Information Center journal, *Impact,* to Ginzberg's criticisms (1970) and counselor rebuttals.

Ginzberg explains the rationale for his study and the interdisciplinary make-up of his staff. The team represented competencies in economics, sociology, psychology, and education, in close liaison with leadership in the guidance field.

His main contentions are: (1) Career guidance is a minor commitment of the guidance profession; its major commitment is to upper- and middle-income college-bound youth. (2) Guidance counselors in high schools are "frequently not doing *any* guidance," let alone career guidance. Instead they are heavily involved in "institutional

stabilization activities" such as handling problem students. (3) The quality of occupational information now being disseminated is "next to worthless."

His remedies call for tapping community resources, making greater use of teaching staffs, using group guidance, and rescinding the teaching requirement for counselors. He is opposed to extending the career-guidance theme into the elementary schools—a view that provokes much discussion in the responses from counselors. Instead he feels that career guidance should be expanded at the adult level.

Ginzberg, Eli, *Career Guidance: Who Needs It, Who Provides It, Who Can Improve It.* New York: McGraw-Hill, 1971b, 356 pp. $7.95

In this unusually forthright book Ginzberg applies his experience in manpower- and career-development research to the field of career guidance in school, government, and industry. The book is based on a searching inquiry and contains fundamental criticisms of the guidance movement. He decries, for example, the way counselors are recruited and trained and how they spend their time. His recommendations include the following: (1) Educational and career guidance should be the primary commitment of the profession. (2) The education of guidance personnel must include more training in the dynamics of the labor market. (3) The requirement of teaching experience for the certification of school counselors should be rescinded. (4) Improved counselor performance should be sought through more emphasis on group techniques.

Ginzberg's analysis of shortcomings and his prescriptions for the profession are presented with sufficient candor to incite rebuttal on specific points, but the overall effect of this book should be highly beneficial. It ought to be read by anyone seriously interested in the guidance profession.

Ginzberg, Eli, "A Critical Look at Career Guidance." *Manpower,* 1972, Vol. 4, No. 2, pp. 3-6

Ginzberg's concern over the discontinuity between vocational guidance as it is practiced and the needs of disadvantaged groups is the theme of this article. He charges that "Guidance has an exaggerated and unrealizable ambition—to add significantly to human happiness, in what, for most clients, amounts to only a few hours of counseling."

He also brands experiments in computerizing information for career decision-making as "premature and of questionable value. At worst, the computerization focuses attention on gadgetry and deflects the attention of the profession away from deepening understanding of the process of making choices and improving the overall quality of information on which judgments are based."

Ginzberg, Eli; Ginsburg, Sol W.; Axelrod, Sidney; and Herma, John L., *Occupational Choice: An Approach to a General Theory.* New York: Columbia University Press, 1951, 271 pp. (Out of print)

Ginzberg's focus—that of the manpower economist concerned for the optimum use of human resources—was combined in this study with that of psychiatry, psychology, and sociology, in a pioneering effort to build a developmental theory of occupational choice. Ginzberg, who criticized post-World War II vocational guidance for "flying blind" without a commitment to any theory of occupational choice, has remained a controversial figure. His new book (Ginzberg, 1971b) has aroused fresh debate, with personal counseling proponents challenging his argument that guidance should be educational-vocational in focus.

Data were obtained from New York students, interviewed at each of the eight stages of the educational process—from sixth grade to advanced graduate study. The resulting theory views occupational choice as a process of decision-making that begins with a fantasy period (age 11), goes on to a tentative period (ages 11-18), and is resolved in a period of crystallization and specialization, when the individual commits himself to a field. This work has exerted a strong influence on research in vocational choice over two decades.

Goldman, Leo, "The Process of Vocational Assessment," in Henry Borow, ed., *Man in a World at Work.* Boston: Houghton Mifflin, 1964, pp. 389-410

This chapter bridges the gap between theory and counseling practice; Goldman interprets the contributions of decision and information theory to the counselor's role as appraiser of data. His view is that assessment should be tailored to the needs of the individual, on the grounds that "too much counselor structuring tends to discourage client responsibility." He recommends sequential as-needed testing in contrast to the "annual ceremony" of the standardized achievement battery, which generates much useful information, but also a great deal of "superfluous and needlessly repetitive" data.

Goldman, Leo, *Using Tests in Counseling.* Second edition. New York: Appleton-Century-Crofts, 1971, 483 pp. $9.95

In the new edition of this textbook, Goldman reiterates the need for counselor competency in test selection, interpretation, and communication of scores, but he also takes heed of the social changes that are reshaping the role of the counselor. Their role in past decades as educational gatekeeper is seen as rapidly shifting toward that of facilitator of opportunity, particularly for minorities.

He points out that achievement tests were developed for maximum stability of measurement, regardless of specific environmental change. But as the goals of testing become educative rather than predictive, he foresees an approach that will design tests "to measure mental functions

which are related to learning styles and help plan specific learning methods and sequences for each individual." He recommends the study of Piaget's work as especially rich in sources of ideas for this kind of test development.

Gribbons, Warren D., and Lohnes, Paul R., *Emerging Careers.* New York: Teachers College Press, Columbia Press, Columbia University, 1968, 202 pp. $8.95

The authors present a description and analysis of the career development of 111 boys and girls over a period of seven years—from the eighth grade until two years after high school. An instrument to measure a student's vocational maturity or "readiness for vocational planning" was developed, and this instrument was found to be valid in predicting the choice of a high school curriculum. The study tests current theories of career development and, by application of Markov chain analysis, explores new methods for statistical interpretation of longitudinal data. As such it represents one of the few serious attempts to study career development as an evolving process.

Gysbers, Norman C., and Moore, Earl J., "Media in Career Development." *Educational Technology,* 1971, Vol. 11, No. 3, pp. 16-17

This brief article presents a worthwhile description and discussion of various categories of media as they are used in career guidance. The four categories (which the authors have borrowed from Albert Thompson of Teachers College) include: (1) prestructured and fixed, (2) input controlled by individual, (3) simulation of situations, and (4) real situation experiences. The authors predict extended use of materials and programs in each category. They feel particularly strongly that simulation "may become one of the most potent mediums . . . in career development."

Gysbers, Norman C., and Moore, Earl J., *Career Guidance: Past, Present, and Future.* 1972, 178 pp. (Unpublished manuscript)

This presentation synthesizes the latest thinking on the historical role of vocational guidance, its current status, and the mounting trend toward making its counterpart, career development, "a key construct of the schools of tomorrow." It was written for the January 1972 National Training Conference. Gysbers and Moore predict that the career-development movement will be a major force in educational change: "It encompasses all specialized interest groups, . . . and will provide a common base for establishing equity in educational goals." The hurdles yet to be overcome are seen to be the problems of evaluation and assessment, plus the need for substantial funding by local, state, and federal sources.

In their discussion of the future trends, Gysbers and Moore outline ways to implement a comprehensive program of career development. They point out that programs of the future will have to be "comprehensive, mainstream, and utilize new and emerging technology and media."

A few examples of specific recommendations are: (1) using the community for apprentice opportunities for students to work in government and other service organizations for school credit, (2) work-study programs in harmony with the individual's career plans, and (3) utilizing probability in computer-guidance systems to provide decision-making simulation experiences.

They conclude with a discussion of the need to instill in all educational personnel the knowledge and understanding of concepts and procedures involved in such a comprehensive kindergarten-adult program. Particularly they urge changes in programs for training counselors to "encompass an educational model based on career development instead of being crisis-and-quasi-administrator oriented."

Gysbers, Norman C., and Pritchard, David H., eds., *Career Guidance, Counseling, and Placement.* Proceedings of the National Conference on Guidance, Counseling, and Placement in Career Development and Educational-Occupational Decision Making, 1969, University of Missouri, Columbia, Mo., 104 pp. (Mimeographed)

The proceedings of this national conference are published in mimeographed form as a "shock wave" resource for the ensuing series of nine regional conferences. The final publication will be a handbook for educational administrators on vocational guidance, placement, and counseling synthesizing the findings of the series of conferences. (See Gysbers and Moore, 1972, for preliminary version.)

The conference theme was to develop goals and recommend policies, to identify and assess exemplary programs, developments in theory, and so forth. Major presentations by Robb, Osipow, Townsend, Herr, and Hoyt are included in this report.

Hansen, Lorraine Sundal, *Career Guidance Practices in School and Community.* Washington, D. C.: National Vocational Guidance Association, 1970, 188 pp. $3.50

The wealth of up-to-date information contained in this book and the clarity of its organization and writing make it one of the outstanding references in the field of career development and guidance. It has significance beyond its own merits, however, as a model of how the wealth of material buried in the Educational Resources Information Center (ERIC) can be extracted for low-cost mass circulation. This project was undertaken by the ERIC Counseling and Personnel Services Information Center as a four-part model for monographs involving consultation with experts in the concepts of a field of interest, a contract with an individual for writing-editing, use of the ERIC resources to identify and retrieve available information, and publication through an existing professional organization (in

this case the National Vocational Guidance Association).

In the opening chapter Hansen delineates theories of career development and decision-making and discusses their implications for practitioners. The following sections provide synopses of programs and practices already in use by school systems, as well as programs coordinating school and community resources, and innovations utilizing advanced media and technology. There is an excellent bibliography for each chapter.

Havens, Robert I., issue ed., "Technology in Guidance." *Personnel and Guidance Journal*, 1970, Vol. 49, pp. 170-263

This special issue is a collection of invited articles designed to interpret the potential of computers in the field of guidance. Written in nontechnical language by guidance experts who are also knowledgeable about computer technology, the papers present a valuable introduction. Information storage and retrieval processes are described as well as some educational- and career-information systems. Invasion of privacy is also discussed, with some suggestions for regulation of the release of information. The role of the counselor is described as that of "linker," one who can help the information generators and systems designers understand the needs of the users, and who can also assist students in using the systems. Counselors are warned to keep abreast of the new technologies if they wish to share in the decisions that are likely to affect guidance in the future.

Hayes, John, "The Role of Occupational Information in Careers Guidance," in Barrie Hopson and John Hayes, eds., *The Theory and Practice of Vocational Guidance: A Selection of Readings*. Oxford: Pergamon Press, 1968, pp. 435-443

This article calls for occupational information that will broaden students' occupational horizons and yet not mislead them with unrealistic or incomplete reports. The author, a British vocational educator, reports a survey in Leeds that suggested that more than 50 percent of all job changes among young people resulted from a mismatch between job expectations and realities. He also notes that students from low-income backgrounds have much narrower perspectives on job possibilities than middle-class students, and even at the university level will opt for jobs in familiar categories. Good occupational literature would be a basic component of a career curriculum, he points out, and until such curricular improvements are made, good publications are even more important as an independent resource.

Holland, John L., *The Psychology of Vocational Choice*. Waltham, Mass.: Blaisdell, 1966, 132 pp. $2.50

Holland suggests that "the choice of a vocation is an expression of personality. Vocational satisfaction, stability, and achievement depend on the congruency between one's personality and the environment (composed largely of other people) in which one works."

From this starting point he develops a theory of vocational choice based on the following assumptions: (1) People can be characterized according to their resemblance to one or more personality types. (2) Environments in which people live can be characterized by their resemblance to one or more model environments. (3) The pairing of persons and environments leads to predictable outcomes in such phenomena as vocational choice, vocational stability and achievement, personal stability, creative performance, and susceptibility to influence.

Both people and environments are categorized as one of six types—realistic, intellectual, social, conventional, enterprising, and artistic. By comparing a person's attributes with those of each of the model types, it is possible to obtain a personality "profile" with which to determine which type he resembles most. Similarly, each environment is dominated by a given type of personality and "thus the environment can be assessed in the same terms as we assess people individually." The author suggests that "if we know a person's personality pattern and the pattern of his environment, we can . . . forecast some of the outcomes of such a pairing."

Holland, John L., "Current Psychological Theories of Occupational Choice and Their Implications for National Planning." *Journal of Human Resources*, 1967, Vol. 2, pp. 176-190

Holland examines two questions concerning the contributions current theory and knowledge about occupational choice make to manpower planning: How can we manipulate distributions of students and adults in their choice of vocation? How can we increase everyone's educational aspiration and eventual vocational attainment?

The author cites some theories and facts about occupational choice, then offers practical recommendations such as: alternatives to traditional vocational counseling; recovering such overlooked sources of talent as women, handicapped persons, and those from rural or depressed regions; and a broader definition of the goals of manpower planning that would include concern for mental health. The thread running through all of these suggestions is that it would be wiser to be concerned with the encouragement of talent rather than with the manipulation of it according to some notion of an ideal distribution.

Holland, John L., and Whitney, Douglas R., "Career Development." *Review of Educational Research*, 1969, Vol. 39, pp. 227-237

This article reviews individual, comparative, and longitudinal research in the area of career development from April 1965 to July 1968. The authors charge that a typically narrow approach has brought no information explosion of "ideas worth having." This has limited research

to "narrow experimentalism, indiscriminate statistical manipulations and timid theorizing." They call for a new problem-oriented, open-minded view of the study of career development.

Hoppock, Robert, *Occupational Information: Where to Get It and How to Use It in Counseling and in Teaching.* Third edition. New York: McGraw-Hill, 1967, 598 pp. $9.50

This standard text is designed for the practical education of counselors, teachers, psychologists, administrators, and others involved in providing occupational guidance and information. Opening chapters identify the basic types of occupational information, show where this material may be obtained, and how it should be classified. Further chapters discuss basic theories of vocational choice and career development. Final chapters deal with the principles and methods of teaching occupations and describe a variety of ways in which occupational information may be presented. The book includes numerous sketches of actual practice in schools, government, and industry. The appendixes present demonstration group and case conferences, practice job interviews, and lesson plans for use in counselor education. The bibliography contains over 500 selected items.

Hoppock, Robert, "Occupations and Guidance," in William H. Van Hoose and John J. Pietrofesa, eds., *Counseling and Guidance in the Twentieth Century: Reflections and Reformulations.* Boston: Houghton Mifflin, 1970, pp. 90-97

Hoppock's chapter in this anthology of personal reminiscences by guidance leaders defends his emphasis on occupational information as opposed to the trend toward individual counseling. He sees the major objective of counseling as reaching large groups of normal students "who may be able to solve their own problems if we give them the information they need." He deplores the status symbol of individual counseling, which, he feels, "may be the reason so many counselors resist going back into the classroom to teach courses in educational planning, career planning, precollege orientation, and job finding."

Hopson, Barrie, and Hayes, John, eds., *The Theory and Practice of Vocational Guidance: A Selection of Readings.* Oxford: Pergamon Press, 1968, 523 pp.

This book, though addressed primarily to a British audience, is one of the most significant compilations of current thinking on vocational guidance. Its purpose is to present a wide interdisciplinary range of views on theory and practice as developed in America as a guide for the British, who have only recently undertaken to provide vocational guidance counseling in the school setting. Traditionally vocational guidance in England has been the role of the Youth Employment Service. The choice of contributors is outstanding; the articles discuss the development of vocational-choice theory from the "St. Paul on the way to Damascus blinding flash" approach to the sophisticated sociological, economic, psychological, computer-science, and decision-theory concepts. It also includes down-to-earth articles on how to carry out effective vocational guidance. The editors, both on the staff of the Vocational Guidance Research Unit at the University of Leeds, contributed articles focusing on testing and occupational information for British youth.

Hoyt, Kenneth B.; Evans, Rupert N.; Mackin, Edwin F.; and Mangum, Garth L., *Career Education: What It Is and How to Do It.* Salt Lake City, Utah: Olympus Publishing Co., 1972, 190 pp.

The question of whether or not to jump on the career-education bandwagon is thoughtfully examined in this monograph, prepared by eminent vocation-oriented educators. The foreword presents the arguments for skepticism, based on the short track records of Commissioners of Education, the dressing up of old concepts to look new, and the who, how much, and how long of funding.

After delineating the components of what career education involves, they straightforwardly assess the immensity of the task of change-over. "If career education succeeds, nearly every teacher and administrator will have been retrained and nearly every prospectus and curriculum guide rewritten. The Carnegie unit must be replaced with an objective measure of performance."

The ingredients essential to making the major turnaround are outlined in the final chapter. Highlights are: (1) Changing attitudes of professional educators—with special attention to reeducating counselors—and providing them with varieties of work experience and opportunities to interact with business, industry, and labor. (2) Drastic changes in teacher and professional education. Part of this emphasis must be to help prospective teachers see occupational implications of their subject matter. (3) The restructuring of curriculum and instructional materials to provide a multimedia approach, particularly in social science. (4) New techniques of individual and occupational assessment; use of simulation techniques for allowing individuals to discover abilities and interests.

This book, a new publication in the field, is an important "hands-on" experience in itself.

Katz, Martin, *Decisions and Values.* New York: College Entrance Examination Board, 1963, 67 pp. $2

This excellent monograph defines guidance to mean "professional intervention in the choices an individual makes among the educational and occupational options our society allows him." Thus the emphasis is on "career" guidance which is, to a considerable extent, guidance for occupational decision-making. The author suggests that many vocationally oriented decisions are concentrated in the secondary school years and that two crucial choice points fall in this period, one at the beginning and the

other near the end of the high school years. The author reviews the state of occupational-choice theory and its corollaries in guidance, and then considers more specifically a rationale for the nature of the guidance process, focusing on these two important choice points.

Katz, Martin, "A Model of Guidance for Career Decision-Making." *Vocational Guidance Quarterly*, 1966, Vol. 15, pp. 2-10

In this article the author describes a theoretical model of decision-making, perhaps the least studied and least understood aspect of the guidance process. The model attempts to incorporate the student's values explicitly into the decision-making process. It attempts to provide a vocabulary for discussing values, and also a means whereby they can be examined in the real world of necessary choices. The model is presented as a paradigm for development and research rather than an immediate aid to the practicing counselor.

Katz, Martin, "Can Computers Make Guidance Decisions for Students?" *College Board Review*, 1969, No. 72, pp. 13-17

The author describes a System of Interactive Guidance and Information under development at Educational Testing Service. While it has been clear that computers can do a number of routine noncounseling tasks, the intent of this system is to go beyond mere storage and retrieval of data and help the student in the process as well as the content of career decision-making. In this regard, the intent is to help the student to take responsibility for those decisions. One takes special hope from the fact that the author talks like a counselor, not a computer. (See also 70.)

Keeslar, Oreon, *A National Catalog of Financial Aids for Students Entering College*. Fourth edition. Dubuque, Iowa: William C. Brown, 1969, 487 pp. $8.75

This extensive catalog was written primarily for graduating high school seniors in a simple, easy-to-use style. It gives advice and valuable information on making a systematic search for financial assistance for college. It contains specific details on over 1,600 programs, including such information as eligibility and restrictions, value and basis of awards, application procedures and deadlines, and sources of further information. Also included is an index listing sources of financial aid according to special purposes and restrictions, advice on employment at college, information about testing programs, and a bibliography.

Kroll, Arthur M.; Dinklage, Lillian B.; Lee, Jennifer; Morley, Eileen D.; and Wilson, Eugene H., *Career Development: Growth and Crisis*. New York: John Wiley, 1970, 262 pp. $8.95

Although the title of this work implies a general treatment of career development, the process of decision-making is the dominant theme. It includes useful discussions of such topics as models of decision-making, research on the teaching of decision-making, and individual coping styles. An especially interesting section is devoted to decision-making in the career crisis of losing a job.

Krumboltz, John D., ed., *Revolution in Counseling: Implications of Behavioral Science*. Boston: Houghton Mifflin, 1966, 121 pp.

This small volume reports the proceedings of a conference at Stanford University on new directions in counseling. It includes papers by John Krumboltz, Sidney Bijou, Edward Shoben, H. B. McDaniel, and Gilbert Wrenn. A major theme in the conference was the application of modern behavioral sciences in the counseling process. It includes interesting though perhaps controversial new theoretical approaches.

Landy, Edward, and Kroll, Arthur M., eds., *Guidance in American Education II: Current Issues and Suggested Action*. Cambridge, Mass.: Harvard Graduate School of Education, 1965, 316 pp. $4.95

This collection of papers of the second summer institute for Administrators of Pupil Personnel Services is primarily concerned with the social and school factors holding back the disadvantaged student from educational and job opportunities. It also includes a section on career-development theory, with papers contributed by Cooley and Tiedeman.

Landy, Edward, and Kroll, Arthur M., eds., *Guidance in American Education III: Needs and Influencing Forces*. Cambridge, Mass.: Harvard Graduate School of Education, 1966, 261 pp. $4.50

The 1965 Institute for Administrators of Pupil Personnel Services focused both on theoretical socioeconomic and psychological issues and on down-to-earth discussions of the operational administration of guidance and other pupil personnel programs. Articles by Waetjen and Dyer are annotated separately.

Law, Gordon F., ed., *Contemporary Concepts in Vocational Education*. The First Yearbook of the American Vocational Association. Washington, D. C.: American Vocational Association, 1971, 435 pp. $8.50

The decision of the AVA to bring out a yearbook presenting the multiplicity of points of view on the career-centered concept of education typifies the growing concern for bringing career development into the nation's schools. This first yearbook contains 59 articles by vocational teachers, researchers, and administrators, and covers such fundamental topics as: accessibility and equal educational opportunity; guidelines for implementing the "newly-minted term, 'career education'"; accountability

and cost-benefit analysis; systems planning and performance objectives; and vocational horizons for the disadvantaged. The chapter entitled "Career Development: A New Perspective for Education," features articles by Gysbers and Moore, Hoyt, and Bottoms—all leaders in the field of vocational guidance.

One shortcoming is the lack of any unifying introduction or summary, so that the reader is left to utilize the articles as pieces of the "mosaic" pattern, a phrase the editor uses to describe the publication. Articles by Marland and Schaefer are annotated separately.

Loughary, John W., ed., *Counseling, A Growing Profession*. Report of the American Personnel and Guidance Association Concerned with the Professionalization of Counseling. Washington, D. C.: American Personnel and Guidance Association, 1965, 106 pp. $1.75

This important report contains the standards for professionalization of counseling set by the Association for Counselor Education and Supervision, the American School Counselor Association, and the American Personnel and Guidance Association. It is of primary concern to counselor education in the programs implemented to achieve these standards.

Loughary, John W., et al., *Man-Machine Systems in Education*. New York: Harper & Row, 1966, 242 pp.

This nontechnical guidebook to the potentials of man-machine systems in education is directed to an important goal—to make computer technology a partner instead of an afterthought in educational planning. Defining man-machine systems as "a set of planned procedures in which human and machine capabilities are used in an integrated manner," the authors complain that too often educators attempt to use machines to achieve results that were planned independently of the machines. They have provided excellent descriptions of a wide range of educational applications including instruction, instructional management, school management, pupil personnel services, student appraisal, and counseling and guidance.

Mahler, Clarence A., *Group Counseling in the Schools*. Boston: Houghton Mifflin, 1969, 234 pp. $5.50

Mahler distinguishes between group guidance (in which the adult tells the students what they should know), group psychotherapy, and group counseling. He defines the goal of group counseling as: "To develop relations which will enable the counselor to meet the important developmental needs of students and to help with the identity-seeking process." He cites as "disheartening" the guideline stressed in many counselor-education materials of having a minimum of one counseling session per student during the school year. He points out that in reality it is "very seldom that large numbers of students have real and significant personal contact with the counselors." On the other hand, he feels group counseling can accomplish good working relationships with the students. This book is particularly useful with respect to counselor education.

Marland, Sidney P. Jr., "Career Education Now," in Gordon F. Law, ed., *Contemporary Concepts in Vocational Education*. The First Yearbook of the American Vocational Association. Washington, D. C.: American Vocational Association, 1971, pp. 41-49

Commissioner Marland, in a speech delivered before the National Association of Secondary-School Principals in January 1971, assigns the highest priority of the U.S. Office of Education to a goal of making "every young person completing our school program at grade 12 ready to enter higher education or useful and rewarding employment." He criticizes the "irrelevant general educational pap" now set before 1,500,000 high school students—half the student population. His recommendation is a "new educational unity" that blends career program and academic preparation and does away with general education. Recognizing the magnitude of the task, he proposes some interim strategies such as upgrading vocational education, providing more options for high school graduates, involving the leadership of business and industry, and providing funds for teacher leadership.

McCracken, Samuel, "Reviews of College Guides," *Change*, 1972, Vol. 4, No. 5, pp. 53-56

This excellent article is an example of "accountability" applied in a new context—the critical review of college guides and catalogs. To question their traditional omniscience requires both considerable knowledge and a sense of irreverence; McCracken, a Reed College humanities professor, supplies both.

Taking the consumer's side—how parents and students can make rational decisions about the purchase of the increasingly expensive college education—McCracken finds that neither individual catalogs nor the "metacatalogs" are much help in identifying the elusive differences in colleges. The catalogs suffer from homogenization and packaging cleverness, according to McCracken. Of the metacatalogs he notes that Barron's (7), Cass and Birnbaum (12), and the Yale Daily *Insider's Guide* do the best job in giving a "sense of institution" provided the author is writing about a school he knows. He reserves blistering comments for Lovejoy's (23) and Berman's *Underground Guide*.

He concludes that writers of both campus and metacatalogs would do best to avoid "the Sears Roebuck Wish Book approach" and "lead the dreaming audience into the world of campus reality."

National Advisory Council on Vocational Education, *Counseling and Guidance: A Call for Change*. Sixth report. Washington, D. C.: National Advisory Council on Vocational Education, 1972, 8 pp.

This report articulates the resentments of vocational-education leadership against guidance for snubbing vocational-technical education. They charge that counsdors know and care very little about the world of work, pesist in an unrealistic effort to provide one-to-one counseing, and provide irrelevant and ineffective services to the hard-core disadvantaged. The 16 recommendations for reform listed in this report cover counselor educationand training relevant to the world of work, use of paraprofessionals and community resources, career-developnent programs, group guidance, computerized-informationsystems, and so forth.

See annotation of *Vocational Education: The Bridg between Man and His Work* (Advisory Council on Vocational Education, 1968) for a discussion of the backgroundand sphere of interest of the Council.

National Vocational Guidance Association, *A Reort of the Invitational Conference on Implementing Career Development Theory and Research through the Curriculum*. Washington, D. C.: National Vocational Guidance Association, 1966, 194 pp. (Mimeographed

The 1966 National Vocational Guidance Association Conference convened to discuss the urgent necessity of translating the research and theory of guidance into practice. The strikingly readable papers in this volume all background information for or a result of the conference, cover such topics as strategies for curriculum change,the meaning of work in an age of affluence, work and the productive personality, and the guidance counselor inthe "plausible future."

Among the conclusions reached are: (1) Interdisciplinary communication about vocational development must be improved. (2) Our value system is closely tied tothe meaning of work, and as machines do more and more of the routine tasks, man's satisfaction must come from service to his fellow man. (3) Tiedeman's structural conceptualization of age, developmental stages, and counselor functions will be useful in guidance theory and practice. (4) Study of various curricular programs is needed to reveal their respective strengths and weaknesses in relation to vocational guidance. (5) Counselors must be trained to discern more efficiently the worker's perceptions of his job, his attitudes, and the relationship between his job and his way of life. A significant chapter by Borow is annotated separately.

O'Hara, Robert P., and Tiedeman, David V., "Occupational Facts and Their Use: Mediation and the Generation of Occupational Information," in Gerald G. Somers and J. Kenneth Little, eds., *VocationalEducation: Today and Tomorrow*. Madison, Wis.: Center for Studies in Vocational and Technical Educaton, University of Wisconsin, 1971, pp. 63-99

O'Hara and Tiedeman describe a sophisticated concept of "mediation" as the process of incorporating occupational data into the individual's decision-making processes. Tiedeman's theory is further elaborated in his design for the experimental Information System for Vocational Decisions (ISVD), one of the early landmark computerized-information systems. (See also Vriend, 1970.)

Osipow, Samuel H., *Theories of Career Development*. New York: Appleton-Century-Crofts, 1968, 259 pp. $6.75

This book has a dual focus, making it a useful overview of the field of career development and of the problems of developing models to categorize behavioral phenomena. It combines comparative analysis of four major approaches to the theory of career decision-making with interpretations of their potential practical value to counselors. The four approaches described in detail are: trait-factor theories, sociology and career choice, self-concept theory, and vocational and personality theories.

Peters, Herman J., and Hansen, James C., eds., *Vocational Guidance and Career Development: Selected Readings*. Second edition. New York: Macmillan, 1971, 483 pp. $5.95

The 1971 edition of this excellent source book of readings is one of the first references to reflect the new concerns and perspectives of vocational guidance and career development. It is designed to give counselors and counselors-in-training a condensed survey of the work of the best-known leaders in the field. The anthology contains over 40 articles dealing with concepts of work, theories of vocational guidance, guidance procedures, vocational development, and new chapters on guidance and career development of the disadvantaged, women, and continuing needs in adult vocational guidance and career development. Each unit contains a useful bibliography.

Pietrofesa, John J., and Vriend, John, *The School Counselor As a Professional*. Itasca, Ill.: F. E. Peacock Publishers, 1971, 213 pp. $4.25

This book also examines counseling by the yardstick of attributes used by sociologists to accord professional status to an occupation, and makes many suggestions for helping counselors attain this status. The attributes are defined as: (1) a systematic body of theory, (2) professional authority, (3) sanction of the community, (4) a regulative code of ethics, and (5) a professional culture. Although counseling does not have the "self-regulation monopoly" of medicine or law, the authors regard the state certification requirements as a move toward fulfilling the requirement of sanction of the community. The book contains a useful table indicating certification requirements in each of the 50 states as of June 1970. This table shows that all but two states require a "teaching certificate or equivalent" and almost as many require at least a year of teaching experience. It is a useful source of

important documents, such as the APGA *Code of Ethical Standards*, the APGA *Ethical Standards Casebook*, and statements on preparation and role of the counselor. It also includes an excellent bibliography.

Pucinski, Roman C., and Hirsch, Sharlene P., eds., *The Courage to Change: New Directions for Career Education*. Englewood Cliffs, N. J.: Prentice-Hall, 1971, 207 pp.

This is another anthology calling for "the courage to change" vocational education, but without the strident criticisms of guidance sounded by Ginzberg (1971b) and Rhodes (1970). The scapegoat perceived here is the educational leadership. Congressman Pucinski, Chairman of the House Subcommittee on Education, notes with dismay that generous federal funding has not accomplished the goals of the Vocational Amendments of 1968, and blames the educational system for "insensitivities, bureaucracies, professional inbreeding, outdated standards, and hesitant leadership."

Individual chapters provide eclectic views of how career education should be reoriented, but perhaps the bellwether chapter is Hirsch's critical analysis of the leadership failures of educational administrators. She calls for a "performance-based" doctorate that would bring new vigor to the movement to reform career education.

Rhodes, James A., *Vocational Education and Guidance: A System for the Seventies*. Columbus, Ohio: Merrill, 1970, 163 pp.

Considered the "Bible" of career education in Ohio, this book is indeed prophetic in its critique of contemporary schools. It scores schools for high dropout rates that Rhodes says reflect the irrelevance of the curriculum, especially to poor youth, and condemns the traditional counselor emphasis upon the college-bound youngster.

The Rhodes prescription is a series of curriculum-based experiences, designed to give the student a broad exposure to clusters of occupations, as well as a way to test student interest in some of those occupations. The sequence of experiences moves from exploration in elementary school to orientation in the middle school, exploration through the practical arts in grades 9 and 10, and occupational choice and placement in grades 11 and 12. Not always specific about how these goals are to be achieved, Rhodes nevertheless does stress experience (the "hands-on" concept) and integration of these experiences into the curriculum (for example, guidelines for grades 9-10 require a minimum of 270 hours of vocational exploration during the two years).

Although there appears to be a commitment to merging vocational and college preparatory programs (as well as technical programs, which Rhodes sandwiches between the two), the book is not clear on how this is to be done. Despite what appears to be an insistence that all students take an updated and renovated kind of career education, the program looks very much like the traditional vocational-education activities, given a new (and persuasive) rationale, purged of irrelevancies (such as woodshops featuring construction of birdhouses), and held to accountability (placement of all students in jobs, college, or postsecondary training).

Riessman, Frank, and Popper, Hermine I., *Up from Poverty*. New York: Harper & Row, 1968, 332 pp. $7.95

This book provides guidelines for using the "New Careers" concept that has gained much attention in the war on poverty. In place of locking the poor into compensatory or "plantation" programs, the New Careers goal is to open up opportunities for useful work, combined with education-as-you-go. "Jobs first, diplomas later" means the individual combines an immediate job with a related educational program and planned advancement – the "ladder of skills" approach. The social sectors where manpower needs far exceed the numbers of trained professionals provide excellent opportunities for the use of gradually trained auxiliary personnel. These include social work, school systems, health services, and police and correction departments. It is in these public service areas that New Careers has introduced a different and provocative approach to coordinating education and work. The authors report that one difficulty has arisen from the reluctance of some professional groups and unions to support such programs. Fearful of a mass influx of untrained workers into their fields, they "dig in behind barriers of professionalism and credentialism." Of course, this is exactly what the approach is intended to alleviate. Some particular programs are described in detail, making this a useful handbook for administrators.

Rothney, John W. M., "Critical Comments on Counseling Circumstances," in William H. Van Hoose and John J. Pietrofesa, eds., *Counseling and Guidance in the Twentieth Century: Reflections and Reformulations*. Boston: Houghton Mifflin, 1970, pp. 224-238

This article is one of the most trenchant indictments of guidance from within the profession. Rothney uses his chapter in this anthology of retrospective essays to rebuke the guidance movement for emphasizing the guidance *process* at the expense of evaluation. His view is that "guidance has a rather bleak past and uncertain future," largely because of "unrealistic and inadequately defined objectives, neglect of thought about current or future outcomes, and research that fails to answer the most pertinent questions."

Samler, Joseph, "Psycho-Social Aspects of Work: A Critique of Occupational Information," in Herman J. Peters and James C. Hansen, eds., *Vocational Guidance and Career Development: Selected Readings*. Sec-

ond edition. New York: Macmillan, 1971, pp. 203-216

Samler criticizes available occupational information resources for their "one-dimensional portrayals" of the "economic man." He finds this emphasis running through both government publications, such as the *Dictionary of Occupational Titles* (32) and the *Occupational Outlook Handbook* (40), and commercial guides. Information should address the "psychological man," he feels, and should deal with the worker's role, the exercise of his values and attitudes, patterns of interaction with others, and the way in which his total personality needs will be met.

It is noteworthy that this article first appeared in 1961 in the *Personnel and Guidance Journal*, Vol. 34, No. 6, but was considered still timely in 1971 when Peters and Hansen compiled this anthology.

Schaefer, Carl J., "Careers Development: Better Options, Better Lives," in Gordon F. Law, ed., *Contemporary Concepts in Vocational Education*. Washington, D. C.: American Vocational Association, 1971, pp. 118-123

This article spells out the components of a statewide career-development curriculum recommended to the Massachusetts Advisory Council on Education by the Schaefer-Kaufman study of vocational and technical education (1967-68). This study urged the elimination of the general high school curriculum, which has been "under increasing fire from students, parents, educators, and employers." The new course of study would combine team-teaching, opportunities for job exploration, and "project-oriented" rather than "subject-oriented" emphasis. The report also prescribes a detailed administrative framework for putting the curriculum into statewide operation. Schaefer concludes that Massachusetts should change its policy of only "tolerating" vocational education to one of wholehearted commitment.

Shaplin, Judson T., "Urban Education in Long-Term Crisis," in Sam Bass Warner Jr., ed., *Planning for a Nation of Cities*. Cambridge, Mass.: Massachusetts Institute of Technology Press, 1966, pp. 246-267

This article takes the position that long-range reorientation of the educational focus as well as substantial federal aid will be essential for the "Hundred Years War" it will take to solve the severe problems of urban education. Shaplin makes several recommendations pertinent to improving the vocational guidance and preparation of urban disadvantaged youth: (1) part-time work programs to provide financial resources, (2) work-study programs, and (3) counseling aimed at acquainting students with the world of work and the attitudes and personal characteristics required to hold a job. He feels that university training programs in both administration and counseling have been deficient with respect to technical education and the analysis of the world of work. He also stresses the need to provide guidance and training entirely outside the school context for youth so alienated that it is impossible for them to return to formal schooling.

Shartle, Carrol L., "Occupational Analysis, Worker Characteristics and Occupational Classification Systems," in Henry Borow, ed., *Man in a World at Work*. Boston: Houghton Mifflin, 1964, pp. 285-309

The gist of Shartle's chapter is the need for a systems approach to occupational analysis that can provide a framework for more effective career decision-making. Pointing out that career decisions inevitably involve many more factors than occupational information, he criticizes available guides for their deficiencies in describing organizational and social environments. He defines the elements of the occupational analysis system of the future as: (1) readily available, flexible, functional classification of occupations that can be readily understood by both counselors and counselees, (2) systems that provide not only current information but projections of future trends, and (3) a sophisticated national master occupational storage and retrieval center that could quickly provide any citizen with job data relevant to his personal interests, aptitudes, and education.

Somers, Gerald G., and Little, J. Kenneth, eds., *Vocational Education: Today and Tomorrow*. Madison, Wis.: Center for Studies in Vocational and Technical Education, University of Wisconsin, 1971, 358 pp. $5

This anthology typifies the interdisciplinary approach of the University of Wisconsin Center to the "intractability" of the problems of vocational education. It supplements articles by leaders in vocational education with some other important chapters on related concerns—guidance, curriculum, and the problems of the disadvantaged.

Michels and Benson trace the development of such innovative programs as cluster approaches and individualized learning packages from the "organic curriculum" concept that stresses behavioral objectives. Sharp, writing on programs for the disadvantaged, is caustic about "the clumsiness and sluggishness of federal procedures, the lack of enthusiasm and the competition for staff and ideas from manpower programs at the state level." Little provides an excellent synthesis of views presented in the individual chapters. See also separate annotations of chapters by Feldman and O'Hara and Tiedeman.

Super, Donald E., "The Vocational Education of the Semiskilled," in Jerry M. Rosenberg, ed., *New Conceptions of Vocational and Technical Education*. New York: Teachers College Press, 1967, pp. 31-43

This article is significant in its forthright criticism of the vocational-education establishment by one of the leading

career-development theorists. Based on his attendance at a vocational-education leadership conference, Super charges that, "Vocational education in this area is, in this period of rapid change, going rapidly nowhere," and that the leaders are "so convinced of their basic assumptions, of the wisdom of their approach and of the unwarranted bias of any and all critics, that they fail to heed the signs of the times."

Super interprets those signs as a pressing need to generalize the education of the semiskilled worker so that he can cope with predictable multiple job changes. This means making the individual *employable*, which does not necessarily call for *occupational* training. So far, vocational education has been predicated on training for an identifiable occupation, one for which there is a manpower need, and for which a training program can be devised. Instead, Super feels that the education should involve enough knowledge of English, mathematics, natural and social science so that new specific lower-level knowledge and skills can be acquired plus orientation toward flexibility and openness to change. He points out that, "The social science of work will be much more important than technological knowledge or skills." This article is perhaps the forerunner of the new concern of theoreticians for what is actually evolving in school programs.

Super, Donald E., "A Theory of Vocational Development," in Donald G. Zytowski, ed., *Vocational Behavior: Readings in Theory and Research*. New York: Holt, Rinehart & Winston, 1968, pp. 121-129

This article by Super, reprinted from *The American Psychologist* (1953, Vol. 8, pp. 185-190), is one of the cornerstones in the developmental concept of career patterns. Super describes his 1950 work with Ginzberg and the shock waves caused by Ginzberg's charge that vocational counselors were giving advice without having a theory as to how vocational choices are made. Super modified Ginzberg's theory of occupational choice (1951) to evolve his own theory of the processes of vocational development.

This article lists the 10 components of his viewpoint. Briefly summarized, they encompass these ideas: (1) People differ in their abilities, interests, and personalities; their characteristics qualify them for a number of occupations (a sharp departure from the early peg-hole approach). (2) Occupations have characteristic patterns of abilities, interests, and personality traits, but with considerable latitude for accommodating individual differences. (3) Vocational preference and competencies are subject to change, making choice and adjustment a continuous process. (4) The continuum of this process is marked off into periods of growth, exploration, establishment, maintenance, and decline. These periods encompass fantasy, tentative, and realistic phases (exploratory stage), and trial and stable phases (establishment stage). (5) The individual's career pattern is determined by his socioeconomic level, ability and personality traits, and by opportunities. Development through these life stages is open to guidance.

Super, Donald E., "Vocational Development Theory: Persons, Positions, and Processes" (pp. 2-9). "Vocational Development Theory in 1988: How Will It Come About?" (pp. 9-14). *Counseling Psychologist*, 1969, Vol. 1, No. 1

In these two position papers Super traces the evolution of his landmark work in career-development theory from its early segmental beginnings of the 1940s and 1950s to prospects for its status in 1988. He starts with his idea of career model, where the individual is perceived as "moving along one of a number of possible pathways through the educational and work systems," in contrast with the occupational model, the static entity of the characteristics of people doing a particular job at a particular time. He discusses the idea of life patterns, vocational maturity, and the self-concept, and describes his longitudinal Career Patterns Study. Super concludes by appraising his 1968 approach "as using differential-developmental-phenomenological psychology to construct a theory of vocational development which deals adequately with the complex processes by which people progress through the sequence of positions which constitute a career."

In looking ahead to 1988, Super stresses the need to develop the career model, to improve our understanding of exploratory behavior, to construct practical measures of vocational maturity, and refine the self-concept. The issue also contains reviews of the two papers and commentary and rejoinder by Super.

Super, Donald E., et al., *Computer-Assisted Counseling*. New York: Teachers College Press, Columbia University, 1970, 133 pp. $4.50

This volume presents a series of papers focusing on the use of computers in the counseling process. They explore the impact of computers on guidance and instruction and describe several computer systems now being used in the field. The final three papers examine some of the larger issues involved in computer-assisted counseling: the effects on counselor roles, the possibility of dehumanization, the educational and political implications of this innovation, and the present status of research.

Super, Donald E.; Starishevsky, Reuben; Matlin, Norman; and Jordaan, Jean Pierre, *Career Development: Self-Concept Theory*. Research Monograph No. 4. New York: College Entrance Examination Board, 1963, 95 pp.

This collection of five essays, one outgrowth of the longitudinal Career Pattern Study, examines the thesis that a person's concept of himself is reflected in the career he chooses. The first chapter deals with historical ques-

tions, the research literature, and the elements necessary to a self-concept theory of vocational choice; the second presents definitions of operational terms. Chapter 3 views occupational self-concept as the incorporation of a person's self-concept and his "dictionary" or understanding of various occupations. The fourth presents various approaches to exploratory behavior and seeks a basis for systematic theory-building about this aspect of the developing self-concept. Finally, an examination of vocational development in adolescence and early adulthood shows that stages, tasks, and behaviors are identifiable and usable in assessing vocational maturity on three scales: (1) classifying according to life stage, (2) classifying within life stages, and (3) a longitudinal approach—"analyzing changes in maturity . . . throughout two or more adjacent sequential life stages." This monograph and a companion by Tiedeman and O'Hara (1963) represent two classics in the career-development literature.

Task Force on High School Redesign, *Toward the 21st Century*. Report of the Task Force on High School Redesign of the Office of High Schools and the Chancellor's Center for Planning. New York: New York City Board of Education, 1971, 50 pp. (Multilithed)

This report of a broad-based New York City public school committee gives a sense of immediacy to the immense problems and changes needed in New York schools. It makes an interesting case history in support of Tyler's general charges (1968) of inappropriateness of American high school programs. Major problems are defined, and immediate and long-range correctives are suggested. Many of the "now" recommendations have direct bearing on the need for improved career preparation.

Some of the suggestions are: job-oriented mini-schools, career conferences, visits to industry, correlating curriculum with job relevance, broadening of opportunities to develop occupational skills, amnesty for dropouts, and programs to upgrade blue-collar job status. The long-range suggestions discuss major redesign models with such components as curricular options, open campus, educational resources center, city-as-school, school of municipal affairs, civic services, urban planning, affective curriculum, and so forth.

Tennyson, W. Wesley; Soldahl, Thomas A.; and Mueller, Charlotte, *The Teacher's Role in Career Development*. Washington, D. C.: National Vocational Guidance Association, 1965, 107 pp. $1.90

The importance of teacher participation in career development is the underlying theme of this pamphlet, written by one of the leading advocates for curricular approaches to vocational guidance. This is an excellent reference for spelling out just how teachers can inject a career emphasis to academic subjects. Tennyson even provides charts that show how subject fields such as art, foreign languages, home economics, and mathematics have relevance to occupational futures.

His view of the classroom teacher as "the one most important element" in a pupil's career development hinges on his argument that "the guidance function can never be fully realized through person-to-person interviews alone. It must be supplemented by group procedures." He does consider it essential that a strong guidance program also include counseling for assessment of ability, career-information dissemination, and helping the student develop self-concepts.

This book contains good discussions of the meaning of work in today's society, the structure of occupations, and bibliographies of source materials.

Thomson, Frances C., ed., *The New York Times Guide to Continuing Education in America*. Prepared by the College Entrance Examination Board. New York: Quadrangle Books, 1972, 850 pp. $12.50

This encyclopedic source book is an educational first, aimed at a growing constituency—adults who seek opportunities in education as a lifetime process. Recognizing the growing acceptance of this concept of education, the College Board undertook this project to collect comprehensive information on courses and programs available. The resulting handbook lists offerings in 2,281 accredited institutions. It also contains information on how to get a high school equivalency certificate, how to secure college credit through the College-Level Examination Program, how to study by correspondence, how adults learn, a section on accreditation, and a section on how to make use of the book.

Thorndike, Robert L., and Hagen, Elizabeth, *Ten Thousand Careers*. New York: John Wiley, 1959, 346 pp.

This is the most comprehensive study ever made of the relationship between multiaptitude test scores and career criteria. The authors followed up 10,000 Air Force personnel for whom extensive aptitude data were available. Test scores were compared with career choice and success (earnings). Results indicated that individuals in some fields have quite distinct aptitude patterns (for example, college professors were high on general intellectual ability but below average on mechanical ability). But generally speaking there was considerable overlap among occupations, and most were not characterized by peculiar patterns of abilities. Undoubtedly, patterns would have been more distinct if larger samples and better occupational definitions had permitted finer distinctions in career groupings.

A more discouraging result was the fact that the aptitude tests had extremely low correlations with career success measures. There are a number of reasons for this result—for the most part they are connected with the

nature of the earnings criterion and heterogeneous jobs lumped into one career category.

Careers do vary a good deal with respect to the intellectual level of their members. But these results are strikingly inconsistent with the assumption that multiaptitude tests give a good indication of an individual's likelihood of pursuing and succeeding in a particular type of career.

Tiedeman, David V., and O'Hara, Robert P., *Career Development: Choice and Adjustment.* Research Monograph No. 3. New York: College Entrance Examination Board, 1963, 108 pp.

This monograph explores the relationship between personality and career. The first two sections are essentially illustrative. Section I is an explanation of the language used for analysis of career development. Section II consists of four cases—interviews with a third grader, a ninth grader, an eleventh grader, and a college junior. Each case is followed by an analysis of such factors as structure of the interview, interests, self-evaluation, awareness resulting from past life experiences, vocational choice process, and interplay of personality and career development. Resulting generalizations note the importance of differentiation and integration processes (making choices) at various stages. The final three sections, which are more technical, illuminate the interdependence of life situation and career and relate each of these to the process of choosing. Topics include: (1) differentiation and integration, the mechanisms of career development; (2) time and occupation, a frame for career development; and (3) observation and career, an assessment of, and some suggestions for, research. This monograph is one of a pair of classics (see also Super, et al., 1963) published by the College Board in the early 1960s.

Turnbull, William W., "How Can We Make Testing More Relevant?" *College Board Review,* 1968, No. 67, pp. 5-10

The author, president of Educational Testing Service, notes that since the end of World War II both the college-going population and the educational programs offered college students have changed dramatically. He comments, "The day when an array of traditional academic measures was an adequate yardstick has vanished forever." He urges that examination programs undergo changes of equal scope so that they match the diversity of students and programs. Turnbull suggests three possible stages in the future development of testing programs: (1) for the immediate future, a "multiplex program" that will extend the recent trend toward a diversity of tests and broaden still further the range of aptitude, interests, and varieties of attainment measured; (2) next, a "school-based program" with a reduction of emphasis on external examinations and increased reliance on the record compiled by the student in his own school; (3) finally, a "student-based program" in which each student is presented with the individual questions most pertinent to his past preparation and to his responses to test questions earlier in the sequence. Such tests would require the aid of a computer and would provide the individual student with the best opportunity to display his own talent and accomplishment, without wasting time on tasks either well below or well beyond his level of development ability.

Tyler, Leona E., *The Work of the Counselor.* Third edition. New York: Appleton-Century-Crofts, 1969, 274 pp. $7

This well-established and respected text incorporates a broad view of educational, vocational, and personal counseling and places special emphasis on the processes whereby counselors exercise professional responsibility. The author has done an unusually careful job of relating research literature to counseling practice. The appendix contains some 500 references to research literature.

Tyler, Ralph W., "Investing in Better Schools," in Kermit Gordon, ed., *Agenda for the Nation.* Washington, D. C.: Brookings Institution, 1968, pp. 207-236

Ralph Tyler criticizes American high schools for failing to serve effectively more than half the youth of high school age. Written as part of a collection of position papers contributed by eminent scholars in many fields for the incoming Nixon administration in 1968, this article may well have strongly influenced Marland to make "career education" his administrative password.

Tyler calls for a major overhaul of secondary education to make it appropriate for noncollege-bound youth, potential dropouts, and other students. The difficulty is not in the adequacy of the students, Tyler feels, but in the irrelevance of those programs to their own lives.

The high school as an "adolescent island," isolated from the adult world, is an obsolete assumption, he argues; high schools should do just the opposite—provide significant adult activities, such as job programs, community service, apprentice experience, and so forth. This would necessitate a substitute for grades and credits as qualifications for employment; a certification system would be needed to validate the student's competence. The reluctance of educators, parents, employers, and colleges to recognize such a restructuring of programs might be overcome, Tyler feels, if tests and other devices now available to measure educational achievement could be developed and standardized to measure competence and provide certification. Many other hurdles complicate such an ambitious undertaking: the lack of instructional materials, the tradition-bound teacher education structure, the unsystematic divisions of authority in the educational hierarchy, and the need for massive funding.

U.S. Department of Labor, Manpower Administration, *A Report of the Subcommittee on Career Guidance*

of the Committee on Specialized Personnel. Washington, D. C.: U.S. Department of Labor, 1967, 102 pp. (Mimeographed)

A view from outside the profession of counseling is presented in this report on career guidance prepared by a subcommittee of the Committee on Specialized Personnel of the Department of Labor.

Cognizant of the compelling national need to weave career guidance into the entire educational process, the committee's investigations resulted in 20 recommendations. The first six recommendations are directed toward increasing the supply of high-quality guidance services and in effect multiplying the supply by more effective utilization. Three other recommendations stress the need for universality of career counseling for every individual, particularly the underutilized, unemployed, and disadvantaged. They also urge the establishment of national and regional laboratories with federal funding to develop programs and techniques for curriculum development, group counseling, applications of information technology, and development and dissemination of guidance materials.

The concluding recommendations relate to community participation in the endeavor to bring the meaning of the "world of work" to students and adult clients. This report is a good illustration of the fact that career education was not merely a recent discovery of Ginzberg and Marland.

U.S. Office of Education, *Computer-Based Vocational Guidance Systems.* Washington, D.C.: U.S. Government Printing Office, 1969, 168 pp. $1.25

This volume includes papers presented at a symposium concerning the development of systems for vocational guidance. Part I presents theoretical considerations in developing such systems; Part II considers a variety of problems involved in implementation; and Part III summarizes 10 vocational-guidance systems under development. The authors are quite knowledgeable, and the volume describes well the state of the art as of 1968.

Van Hoose, William H., and Pietrofesa, John J., *Counseling and Guidance in the Twentieth Century: Reflections and Reformulations.* Boston: Houghton Mifflin, 1970, 346 pp.

This collection of "here I stand" essays by leaders in the guidance field, chosen by a panel of the American Personnel and Guidance Association, contains an extra dimension—autobiographical essays that provide significant insights into the individual's professional views of the past, present, and future of guidance. The editors contributed a useful opening chapter—an historical overview of counseling in the twentieth century. Chapters by Borow, Ginzberg, Hoppock, and Samler have the most substance for the area of vocational guidance. Some of the other articles are perhaps overly general or inspirational.

Venn, Grant, *Man, Education, and Manpower.* Washington, D.C.: American Association of School Administrators, 1970, 281 pp. $6

This book is primarily concerned with career education in the secondary schools. It suggests many innovative local- and state-level manpower policies designed to implement a goal of career orientation, rather than "second-class" vocational education. Venn scores the federal manpower programs of the 60s for bypassing educational institutions, "those best able to develop new skilled and technical manpower," and concentrating on remedial programs. The end result, he feels, is that the decade ended with almost as large a pool of disadvantaged and unskilled workers as it began with. He contends that the prevailing concept of vocational education—one "designed for somebody else's children"—fails either to provide an education or to train skilled workers. He suggests new roles for schools, year-round operation, and grass-roots approaches to manpower planning.

Vriend, John, "Report on the Harvard Invitational Conference on Computer-Assisted Systems in Guidance and Education." *Educational Technology,* 1970, Vol. 10, No. 3, pp. 15-20

This article reports on a conference held June 22-27, 1969, involving a number of prominent counselor-educators and representatives from several innovative school districts who together comprise "Educational Systems for the 70's." The central focus of the conference was on two widely discussed experimental computer-assisted guidance systems: (1) the Information System for Vocational Decisions (ISVD) and (2) the Education and Career Exploration System (ECES, 78). The author noted that both systems are undergirded with well-conceived theoretical frameworks of vocational decision-making, but he said that whereas ECES appeared as "a neatly organized and attractively packaged educational-vocational information library . . . [complete with] job simulation experiences," there was "much about the ISVD which was open-ended, tentative, unreconciled, [and] non-operational." The author is one of many who has implied that ISVD has many elements that are several years ahead of their time, whereas ECES is a less ambitious undertaking and is applicable to junior or senior high school guidance programs today. Interestingly enough, funding for ISVD has now ended, while ECES is still undergoing field tests. In this article Vriend also reports on participants' reactions and criticisms to computer-assisted guidance systems in general. The strongest reaction was that lack of money would keep computers from becoming surrogate counselors for years to come, although most participants were excited about the dizzying possibilities presented. There evidently was general agreement, however, that it would be premature to provide extensive information about such systems as part of their counselor-preparation programs.

Waetjen, Walter B., "Policies and Practices in Pupil Personnel Services," in Edward Landy and Arthur M. Kroll, eds., *Guidance in American Education III: Needs and Influencing Forces.* Cambridge, Mass.: Harvard Graduate School of Education, 1966, pp. 227-237

In this paper presented at the 1965 Institute for Administrators of Pupil Personnel Services, Waetjen analyzes the status of guidance counselors in the school hierarchy as "underpaid, understaffed, and underprivileged." He argues that guidance counseling "is a discipline struggling with professional boundaries and nomenclature." One reason for this lack of status is lack of autonomy. Waetjen argues that it is the principal who really determines whether or not counselors function effectively. The principal is seen as the "spindle" around which information flows, and "he determines whether the information leaves the spindle (himself) and goes to the proper service."

Whiteley, John M., and Resnikoff, Arthur, eds., *Perspectives on Vocational Development.* Washington, D. C.: American Personnel and Guidance Association, 1972, 251 pp.

This is a highly useful presentation of the positions of four of the leading career-development theorists—Super, Holland, Roe, and Tiedeman. The rationale for this APGA publication is to make accessible the cornerstone work of the four scholars most instrumental in reformulating career-decision emphasis—away from the simplistic trait-factor model to the complex developmental concepts. Of particular interest are their views on the future of career-development theory set forth in Part III of the book.

Wilensky, Harold L., "Varieties of Work Experience," in Henry Borow, ed., *Man in a World at Work.* Boston: Houghton Mifflin, 1964, pp. 125-155

Wilensky's article, written from the sociologist's vantage point, is an example of the breadth of approach to the issues of vocational behavior covered in Borow's anthology. Wilensky emphasizes the preeminence of job satisfaction as an indicator of life satisfaction and involvement in the mainstream of society. He comments, "Employment remains a symbol of one's place among the living." As a corollary, he discusses his research on work alienation and its corrosive effects on other phases of life. He finds job alienation to be highest among blue-collar workers and engineers, but he notes a general impression that the typical American man is but lightly committed to his work.

Wolfbein, Seymour L., *Occupational Information: A Career Guidance View.* New York: Random House, 1968, 142 pp. $3.95. Paperback $1.95

Wolfbein addresses himself to three major developments that he contends should be a part of the basic knowledge of teaching and counseling personnel: (1) the increase in school enrollments and its effects on the guidance process, (2) the resultant importance of making specific occupational information available to counseling personnel, and (3) the wealth of material relevant to the work environment now available. He concludes by stressing the need for flexibility and adaptability in each person's education and in the educational process itself. The author also urges recognition of the shortage of skilled craftsmen and the use of fiscal and monetary policy to maintain high employment.

Wrenn, C. Gilbert, *The Counselor in a Changing World.* Washington, D. C.: American Personnel and Guidance Association, 1962, 195 pp. $2.50

This 1962 monograph, addressed to the impact of societal change on counseling, has been an influential force in shaping counselor education and practice during the decade of the 60s. Wrenn feels that counselors must be constantly abreast of our rapidly changing culture and the technological, sociological, psychological, and economic factors that have momentous implications for the student and his family. He presents Project TALENT data on how the 1960 counselor used his time and discusses the future expectations of counseling. In taking a second look at his predictions in a similar 1965 APGA monograph (Loughary, 1965) Wrenn revises some of his opinions. In particular, he now considers vocational counseling to be "one of the most vital and distinctive tasks of the school counselor." Expressing concern that the American School Counselor Association official statement on counselor role and responsibility fails to give sufficient emphasis to vocational counseling, he comments, "I fear that the overriding significance of psychologically meaningful vocational counseling is lost."

Zytowski, Donald G., ed., *Vocational Behavior: Readings in Theory and Research.* New York: Holt, Rinehart and Winston, 1968, 486 pp. $7.95

This collection of papers offers a useful and comprehensive overview of recent theory and research in the field of vocational behavior. Emphasizing articles published since 1957, the editor has drawn from industrial and personal psychology and also sociology and social psychology. The collection begins with material on the nature and meaning of work, considers next the structure and perceptual qualities of work, and then examines such factors as maturation, choice, satisfaction, and adjustment. The developmental character of vocational behavior is presented, and the differing theories of occupational determinants are given along with evidence for each. In the choice of papers and excerpts the editor attempts to demonstrate "that vocational role determinants are also the determinants of satisfaction and performance."